A Clinical Lecture
ON
ABDOMINAL EMERGENCIES.

DELIVERED AT THE ROYAL INFIRMARY, SHEFFIELD.

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IT would be impossible in a single lecture to review, however briefly, the entire field of abdominal emergencies, and I shall therefore confine my remarks to the more important lesions which demand early recognition, and, as a rule, prompt surgical intervention.

The majority of acute abdominal cases may be referred to one or other of the following groups:

1. Acute intestinal obstruction.
2. Gastric and intestinal ulcers that have perforated.
3. Acute inflammatory lesions of septic origin.

Ruptured tubal gestation, twisted ovarian pedicle, and traumatic lesions of the abdominal viscera do not come within this classification, and will be referred to separately.

ACUTE INTESTINAL OBSTRUCTION.

Acute intestinal obstruction, as a primary affection, is most often due to strangulated hernia, external or internal; intussusception comes second in the order of frequency, while impacted gall stones and volvulus are less common causes. Not infrequently acute obstruction is grafted on to the chronic type. This is seen most often in cancerous stricture of the large intestine, the contracted lumen of the bowel being blocked by a mass of hard faeces.

Whatever the cause the symptoms are sudden in onset and progressive in character. The abdominal pain is diffuse and, while never quite in abeyance, is subject to periodic exacerbations caused by spasmodic contractions of the intestinal muscles in their endeavour to overcome the obstruction. The exhibition of opium may more or less completely mask the intestinal peristalsis, and it ceases entirely on the advent of peritonitis, but it is incorrect and misleading to assert, as is asserted by the authors of a well-known book on surgery, that "in acute cases intestinal paralysis dominates the picture."[1]

Vomiting of a reflex character is frequently associated with the onset of the attack, but inasmuch as it is one of the initial symptoms of nearly all abdominal storms, it has no special significance.

The typical vomiting of acute obstruction sets in later, sometimes within a few hours, sometimes not until one or more days afterwards. Once it begins it continues with ever-increasing frequency, while the character of the vomited matter degenerates from bile-stained mucus to a brownish faecal-smelling fluid. Except in the rarely seen Richter's hernia, where only a portion of the circumference of the bowel is involved, there is complete obstruction to the passage of faeces and flatus. The abdomen gradually becomes distended, but until the onset of peritonitis it is neither tender nor rigid. The temperature and even the pulse may not show any marked departure from the normal for a day or two.

Strangulated External Hernia.

Strangulated external hernia requires little comment, but, as it is by far the most common cause of acute obstruction, it should always be thought of, and sought for, in the first instance.

Internal Strangulation.

Internal strangulation is most often caused by bands, the products of antecedent local peritonitis, a history of which may be obtained in many cases. They extend between the omentum, appendix, or Fallopian tubes and other parts of the abdomen. They give rise to hyperacute symptoms, with early vomiting. The patients are usually under 40 years of age. Strangulation by Meckel's diverticulum, and through chinks in the omentum, or broad ligaments, or in retroperitoneal pouches, are all rare, and cause symptoms similar to those produced by bands.

Post-operative Obstruction.

Post-operative intestinal obstruction requires a brief notice. It is nearly always due to kinking of the small intestine consequent on adhesions, and at first the mesenteric vessels are not implicated. It is seen most often after operations for acute appendicitis, the symptoms appearing about the end of the first week, and after the patient has apparently reached "smooth water." At first there are merely sharp attacks of colicky pain, and occasionally the intestinal peristalsis is sufficiently powerful to stretch the adhesions and effect relief; but, if not, the typical symptoms of obstruction gradually supervene. As the patients are under trained observers from the onset, operative measures for the relief of this form of obstruction are usually resorted to in good time.

Acute Intussusception.

Acute intussusception is the most common form of obstruction in children, and the clinical picture it presents is seldom obscure. The intermittent character of the pain is very pronounced, indeed the little sufferer may fall asleep between the attacks, which recur at intervals of a few minutes. A curved sausage-shaped tumour, which hardens at the onset of each paroxysm of pain, can almost always be detected somewhere along the course of the colon, while the right iliac fossa appears unduly empty. After a few hours there will be an escape of blood-stained mucus from the anus, and later still the intussuscepted bowel may sometimes be felt in the rectum. Obstructive vomiting is later in making its appearance. In young children there may be severe shock from the first.

Volvulus.

Volvulus occurs after middle life in patients who have suffered from chronic constipation. It concerns most often the sigmoid flexure, but occasionally the caecum is involved. Its most characteristic sign is the rapid onset of abdominal meteorism. The enormously-distended bowel can usually be outlined through the abdominal wall. Vomiting is a late symptom.

Obstruction from Gall Stones.

Obstruction from large gall stones that have ulcerated into the duodenum from the gall bladder is almost limited to elderly women. There will be a history of biliary trouble, and the impacted calculus may occasionally be felt through the abdominal wall. The symptoms are not usually very acute, and relief frequently comes by the stone passing onwards into the large bowel. I have, however, on two occasions seen hyperacute symptoms from this cause.

When acute obstruction supervenes in malignant stricture of the colon the symptoms appear gradually, and abdominal distension is always an early and pronounced factor. Owing to the muscular hypertrophy and accompanying dilatation of the colon on the proximal side of the stricture the peristaltic movements are remarkably powerful. There will be a history of increasing difficulty in getting the bowels to act, and long periods of absolute constipation may alternate with attacks of diarrhoea.

Contrary to what one might expect, the growth may for a long time produce little or no effect on the patient's general health. Indeed, in the last two cases I have seen there had been a distinct gain in weight during the preceding few months with, apart from constipation, no evidence of failing health or strength. The patient will frequently be able to locate the site of obstruction by noting where the peristaltic wave is arrested, and confirmation is afforded by ascertaining the amount of water that can be introduced per anum when the hips are raised on a pillow.

GASTRIC AND INTESTINAL ULCERS.

Perforating ulcers are found in the stomach, the duodenum, the lower end of the ileum, and in the large intestine. In the latter situation they are usually secondary to malignant disease. In the lower ileum they form one of the complications of typhoid fever, appearing during the third week or later.

Gastric ulcers are conveniently divided into the acute and the chronic varieties. The former are often multiple, and occur in young anaemic women. They are especially prone to perforate when situated on the anterior wall.

The chronic ulcer is usually single, of large size, and situated on one or other side of the pylorus. It occurs most often in men between the ages of 30 and 60 years.

The acute ulcer may run a latent course until it perforates, but in most cases there will be a definite history of pain on taking food. The pain is relieved by vomiting, and the vomited matter often contains dark blood.

There is usually a well-defined tender spot to the left of the middle line. When perforation is threatening the pain becomes continuous and the left rectus muscle rigid.

Duodenal ulcer gives rise to pain, which comes on one or more hours after meals, and is relieved by taking fresh food, the entrance of which into the stomach, by causing pyloric contraction, arrests for the time being the flow of the irritating gastric juice.

The symptoms of perforation are rarely ambiguous. The patient is suddenly seized with agonizing pain, which, in the case of gastric and duodenal ulcers, is situated in the upper abdomen. The pale, anxious countenance, the small, rapid pulse, and the subnormal temperature, attest to the presence of shock, which may, however, vary greatly both in respect of its intensity and duration. Locally, the most constant and characteristic sign is board-like rigidity of the recti muscles, with total cessation of abdominal respiratory movements. In a minority of cases the area of hepatic dullness is diminished or lost, owing to the escape of gases into the peritoneal space.

Acute Inflammatory Lesions of Septic Origin.

Of the acute inflammatory lesions I shall refer only to cholecystitis, salpingitis, and appendicitis. (Septic peritonitis is always a sequel to some other disease. It will be dealt with in connexion with appendicitis.)

They have the following symptoms in common: Abdominal pain, more or less continuous; abdominal tenderness, at first diffuse, then becoming localized; rigidity of the overlying muscles; and, with the advent of suppuration, rigors.

The constitutional disturbances will show themselves in pyrexia, always greatest in the evening; increased pulse rate; a coated tongue with anorexia, thirst, constipation; and scanty high-coloured urine loaded with urates. Vomiting is usual, but it is not of a progressive character.

Cholecystitis is seldom seen apart from gall stones, a history of which will be forthcoming. The patients are nearly all elderly, and often fat, women. Palpation will in most cases reveal a distended gall bladder, which should not be mistaken for anything else.

Acute salpingitis is an ascending infection. A vaginal examination will define the swollen and exquisitely tender tubes, and the diagnosis will be strengthened by a history of antecedent or coexisting vaginal or uterine catarrh. In very acute cases the constitutional disturbances are apt to be alarming, and marked tympanites is nearly always present. In most cases, however, under expectant treatment, the storm becomes localized to the pelvis in a day or two.

Appendicitis.

Appendicitis has been so often discussed, that one is almost tempted to apologize for alluding to it. Its relatively great frequency, however, and the importance of duly appreciating its manifold phases, give it easily the first place among the lesions we are considering.

Of 427 abdominal emergency operations performed in the Sheffield Royal Infirmary during the last three years, 264 were for acute appendicitis, while during the same period the appendix was removed 110 times after the subsidence of one or more attacks.

We are still in the dark regarding the precise causation of the disease and of its alleged greater frequency during the last two decades; but when we consider its richness in lymphoid tissue, its low vascularity, and its dependent position, which militates against the easy escape of its contents into the caecum, we cannot feel surprised that it should be so vulnerable to attacks of inflammation. Its resemblance to the tonsils, both as to its structure and liability to septic infection, seems to justify the title "abdominal tonsil" which has been applied to it.

There are many grades in the severity of appendicular inflammation, and it will make for clearness if I begin with the mildest departure from the normal and ascend step by step to the most severe.

Following this plan, appendicular colic due to concretions, or to mucus retained by kinking or constriction of the lumen, claims brief attention. It causes fairly sharp, colicky pains in the region of the appendix, but has no other untoward symptoms.

The next grade in severity is a simple catarrhal inflammation of the mucous lining, with mild constitutional disturbances and slight local pain and tenderness. Under suitable expectant treatment the symptoms subside in two or three days.

Next we have suppurative catarrh with more or less ulceration, or even gangrene of patches of the mucous membrane. The appendix is swollen, and flakes of lymph may be found on its peritoneal surface, but as yet there is no perforation.

This grade gives rise to severe symptoms. The temperature may run up to 103° or 104° F. in the evening, and the pulse to 120 per minute. The localized pain, tenderness, and rigidity are all pronounced, and a definite lump can usually be detected.

The progress of these cases may be either towards resolution or to perforation. If in the first-named direction, amelioration of the symptoms will set in on the second or third day. Perforation is revealed by a sharp increase in the pain, perhaps after it had begun to subside, by an increase in the pulse-rate, and by rigors.

If the appendix has been walled off by lymph before perforation actually takes place, the temperature will rise in ratio with the pulse, which will be full and bounding, and the iliac lump will become larger and more tender. After the storm caused by perforation has abated, the patient may look and feel better, and the symptoms of an acute abdomen may give place to those of a localized abscess.

In the less fortunate cases, where perforation is not preceded by lymph formation, or where the amount is inadequate to exclude the diseased appendix from the general peritoneum, we have grafted on the train of symptoms seen in the worst grade of the disease, the fulminating variety, in which the entire appendix is the seat of acute gangrene.

These symptoms, which are those of acute diffuse peritonitis, should be graven on our memories, because early diagnosis of the condition, followed by immediate operation, is necessary to the rescue of the unfortunate patient from what would otherwise be a certain and speedy death.

The patient may have been ill for a few days from what appeared to be an ordinary attack of appendicitis, or, more commonly, he is seized without previous warning. There will be intense pain in the right iliac region, rapidly extending to the rest of the abdomen. The face will be pale and anxious; the pulse rapid, small, and hard; and the temperature erratic—in the worst cases subnormal. The abdomen ceases to participate in the respiratory movements, becomes rigid and tender all over, and later distended and tympanitic. The legs are drawn up to relax the abdominal muscles and protect the body from the weight of the bedclothes. There is intense thirst with incessant vomiting, the vomited matter welling up apparently without effort on the part of the patient. The distended intestines become paralysed and their contents motionless. The heart beats ever faster and weaker, and the failing circulation manifests itself in the blue and cold lips and extremities. Towards the end mild delirium supervenes, and with its advent the patient ceases to complain of pain or even of tenderness.

Ruptured Tubal Gestation.

Ruptured tubal gestation should be suspected when during the second or third month of a supposed pregnancy the patient is seized with acute pain in the lower abdomen. There may have been nothing aberrant in the previous history of the case, but colicky pelvic pains and irregular uterine haemorrhages are not uncommon. The rapid outpouring of blood from the torn vessels is indicated by blanched lips, a fast soft pulse, great restlessness, and an incessant cry for more air. A bimanual examination will reveal a lump in one or other broad ligament, and possibly fluctuation in the pelvis behind the uterus.

Twisted Ovarian Pedicle.

Twisted ovarian pedicle is indicated by a sudden increase in the size of the tumour conjoined with the signs of subacute peritonitis in the lower half of the abdomen. Ascitic

fluid is rapidly poured out, and in the absence of a definite history may mask the true condition.

INJURIES.

Injuries to the abdominal viscera may result in acute infective peritonitis from the escape of the contents of the stomach, intestines, or bladder, or in severe loss of blood from rupture of the liver, spleen, or kidneys. When the mesentery is torn, in addition to internal haemorrhage there is the danger of the corresponding section of the bowel becoming gangrenous.

Severe shock is apt to be produced by abdominal contusions, even in the absence of gross visceral lesions, and we must in many instances be satisfied at first to wait and watch the progress of the case. The nature of the agent concerned in the injury, and the locality of its impact, may afford assistance in diagnosis, as may also an examination of the urine. Should the shock persist or deepen after an hour or more of watching, or should there be clear evidence of progressive internal haemorrhage, or of commencing peritonitis, the abdomen must be opened forthwith, and the condition dealt with according to its necessities.

DIFFERENTIAL DIAGNOSIS.

The chief difficulties in abdominal diagnoses are a fat abdomen, inability to elicit an exact history of the symptoms, and the order in which they appeared, the advent of peritonitis which overshadows the primary mischief, and the highly reprehensible habit which is still occasionally seen of giving opiates before the nature of the abdominal lesion has been revealed. By masking the symptoms, particularly the pain, it deludes the patient, and sometimes the doctor, into the belief that all is going well when such is not the case, and may be instrumental in delaying urgently necessary operative help. Moreover, opium inhibits peristalsis and diminishes leucocytosis, thereby seriously handicapping the patient's progress.

While in some cases it may be impossible to predict the nature of the catastrophe previous to exploration, one cannot too strongly deprecate the indiscriminate resort to abdominal section as a short cut to diagnosis.

A careful investigation of the history of the case, and of the order of onset of the symptoms, conjoined with the physical signs present, will seldom fail to indicate the nature of the lesion we are called on to deal with, and will permit of orderly preparation being made for whatever surgical measures may be necessary. The advantage of a thought-out plan over a haphazard operation is too obvious to need emphasizing.

When called on to investigate an acute abdominal case, we should keep in mind the threefold classification I have outlined.

In acute obstruction the remittent character of the pain, each exacerbation of which is accompanied by intestinal movements; the complete block to the passage of faeces and flatus; the progressive vomiting; the increasing abdominal distension; and the absence of pyrexia and of abdominal muscular rigidity, make up a picture easily read.

The sudden onset of agonizing pain in the upper abdomen of a young anaemic female, especially if there have been previous symptoms of stomach troubles, is highly suggestive of ruptured gastric ulcer, and, if accompanied by shock, abdominal tenderness, board-like rigidity of the recti muscles, and absence of abdominal respiratory movements, the suggestion becomes almost a certainty.

An antecedent history of pain coming on one or more hours after meals and relieved by taking fresh food will direct attention to the first part of the duodenum as the probable site of perforation.

The diagnosis of acute appendicitis is rarely difficult. Along with the general symptoms of inflammatory fever there will be in the right iliac region localized pain, localized tenderness, and localized muscular rigidity. In a large proportion of the severe cases there will also be a localized swelling, but it must not be forgotten that in the very worst cases this sign may be absent. An inflamed appendix, if directed upwards behind the caecum, may simulate renal trouble, and, when it lies wholly or in part in the pelvis, it may give rise to bladder or rectal irritation. In obscure cases leucocytosis, particularly if it increases from day to day, is suggestive of appendicular abscess.

TREATMENT.

Strangulated hernia, if seen early, should be reduced by gentle taxis, but, if there is the least doubt respecting the integrity of the bowel, taxis should give place to operation. If the patient's condition is good, and the bowel is not seriously damaged, a radical cure should be effected forthwith. It is not only a safeguard against recurrence, but is also a barrier against peritoneal infection from without. When the bowel is found to be gangrenous, wide resection with end-to-end anastomosis may be attempted in young and vigorous patients who do not show signs of profound toxaemia, but the majority of gangrenous cases are too ill to justify this procedure.

It is well to remember that unoperated-on cases have recovered, with, of course, an artificial anus, and that in very bad cases of gangrene the best treatment may be to make a simple incision into the sac without disturbing the exuded lymph, which has probably sealed off the peritoneum.

Obstruction from bands and other similar causes should be sought for systematically. The condition of the caecum is first ascertained. If it is empty, the obstruction will be found by following the small intestine upwards. The possibility of more than one point of obstruction being present must be borne in mind.

After freeing the obstruction, the condition of the bowel must be carefully investigated. If the portion above the constriction is much distended, and does not speedily discharge itself into the lower part, it should be withdrawn outside the abdomen, securely packed off with gauze, and opened on its antimesenteric border. After its contents have escaped, the opening is closed with a continuous suture. Advantage may be taken of the opening to introduce a saline aperient into the bowel. The establishment of an artificial anus in the small intestine is fraught with so many disadvantages and dangers that it should, if possible, be avoided.

Intussusception should, as a rule, be dealt with by operation. If seen early, an opening long enough to admit two fingers is sufficient. The procedure of reduction is of the simplest character, and need occupy only a few minutes. If for any reason operative measures are ruled out of court hydrostatic pressure may be tried. In quite early cases it will often be effectual; but the drawback to its use is that we cannot always tell whether the reduction is complete or not, and so valuable time may be lost. Should reduction be impossible resection of the involved segment of bowel must be performed, but it is nearly always unavailing in young children. A Paul's tube should be tied into each end of the cut bowel and the restoration of the intestinal canal left until a subsequent date.

To prevent recurrence after reduction the bowel should be anchored by a suture and an opiate given.

Gall stones become impacted in the small intestine, usually near its termination. After causing obstruction for a day or more they may be forced on into the caecum. They do not produce strangulation of the mesenteric vessels, and unless the symptoms are very acute, medical measures, such as the administration of belladonna, with hot fomentations to the abdomen, should be tried before having recourse to surgery. The treatment of volvulus is far from being satisfactory. It is usually quite impossible to reduce the twisted bowel, even after its contents have been allowed to escape. The best immediate treatment is to create an artificial anus. Later, the involved segment will require either excision or exclusion by short circuiting.

Acute obstruction secondary to a cancerous growth in the colon should be relieved by a proximal colostomy, the cancer being dealt with after the acute symptoms have passed away. Resection with immediate anastomosis of the colon in the presence of acute obstruction, is hardly ever successful and should not be attempted.

Where the patient is obviously too ill to stand much operative interference a short abdominal incision may be made under local anaesthesia, and a Paul's tube tied into the first coil of distended bowel encountered. Lives have occasionally been prolonged by this simple expedient; but it is unavailing in the presence of gangrene of the bowel.

In advanced cases of acute obstruction the stomach should be washed out preliminary to operation, in order to avoid the grave danger of vomited matter being drawn into the lungs during anaesthesia.

Ruptured gastric and duodenal ulcers should be closed by a double row of continuous sutures inserted well away from the friable edges of the perforation. Additional security is afforded by covering the line of suture with a piece of omentum. Should it be impossible to close the opening it must be drawn up to the surface, and, after anchoring the stomach walls to the parietal peritoneum, surrounded with gauze packing. Where the rupture has occurred soon after a meal, or a long interval has elapsed before operation, there will be extensive peritoneal fouling, and the abdomen will require thorough and systematic flushing. Towards the finish the shoulders should be raised to allow the saline solution to gravitate towards the pelvis.

If the rupture is a recent one, and particularly if the stomach was empty at the time, the soiling may be strictly local, when it is best dealt with by dry mopping. In all cases a pelvic drain tube should be introduced through a median suprapubic puncture, and the patient placed on a sloping bed.

Should gastro-enterostomy be indicated it is better to postpone its performance till a later date.

The treatment of appendicitis is a subject around which much controversy has taken place, and is still far from being settled.

In common with the majority of surgeons I believe that if all cases of acute appendicitis were operated on within the first few hours from the onset of symptoms we should have fewer deaths from the disease and a reduction in the average period of incapacity from work caused by it. At this very early stage the operation is easily performed and has hardly any risk as to life. During the three years 1905-8 there was not a single fatality among 57 patients operated on in the Sheffield Royal Infirmary for acute appendicitis uncomplicated with extra-appendicular abscess. In many of these cases the appendicular canal was full of pus and the mucous membrane gangrenous.

The objection, however, on the part of a large section of the public to operations that may not be absolutely necessary to life, and the hope in each particular case that, after all, non-operative measures may suffice, have hitherto, and will I fear always constitute difficulties in the way of very early interference.

If the case has not been seen, or if the question of operative interference has not arisen until after the lapse of twenty-four hours, it is probably better to postpone operation unless the symptoms are both acute and progressive. Mild cases usually begin to subside on the second day, and if carefully watched may be safely left until the storm has passed.

Immediate operation is called for during any stage of the disease by (1) a rapidly increasing pulse-rate, particularly if unaccompanied by a corresponding rise in the temperature; (2) the recrudescence of acute pain in the appendicular region after it had subsided, or a sudden increase in the severity of the pain; (3) extension of the pain, tenderness, and muscular rigidity to other parts of the abdomen; (4) commencing abdominal distension with or without vomiting; (5) rigors; (6) an increase in the size of the appendicular swelling after the third day; and (7) a change for the worse in the patient's expression.

If there is irritability of the rectum with, perhaps, an abundant escape of mucus, we should suspect and examine for a pelvic abscess.

Operative Details.

As to operative details, I shall only allude to abscess cases and to those grave and, until quite recently, commonly fatal, cases in which septic infection has spread from the appendix to the general peritoneum. The former may be dealt with by direct incision into the abscess cavity in cases in which the abscess is large and well encysted; or, if there is any doubt on the latter point, by opening the peritoneum to the inner side of the swelling, and, after walling off the intestines and pelvis with gauze, raising up the caecum from the outer side, when the abscess will be exposed. The diseased appendix should be removed when it can be easily reached, but we are not justified in running the risk of peritoneal infection by vigorous or prolonged efforts to remove it if deeply placed. In upwards of 90 per cent. of abscess cases treated by drainage alone there is no further appendicular trouble, while in the small minority of cases where a fistulous track will not close the offending appendix can be safely removed on a subsequent occasion.

Owing largely to the work of American surgeons, the treatment of acute diffuse peritonitis, whether secondary to perforative appendicitis or other abdominal lesions, has been entirely revolutionized; and, although Murphy's experience of 35 recoveries out of 36 consecutive cases of acute general peritonitis will probably long remain a record, there can be no doubt that a great reduction has been effected in the mortality-rate of this dread disease. The improved method of treatment is in some respects a reversion to the elementary principles of surgery long known and practised in dealing with acute inflammations elsewhere in the body. In other respects it utilizes recent additions to our knowledge of the physiology and pathology of the peritoneum.

It recognizes that the patient's first and most important line of defence against the ravages of peritoneal infection lies in the undamaged endothelial cells which clothe the abdominal walls and viscera, and that it is worse than useless to try to remove, or to destroy by chemical means, the invading bacteria, because not only is it impossible to do so, but the attempt involves grievous damage to the peritoneal surface and opens up fresh channels through which the septic toxins can gain access to the circulation. It substitutes for the heroic scrubbing, flushing, and evisceration of former times the simple treatment applicable to an acute abscess that has formed around an infected substance elsewhere in the body. It consists in—

1. Removal of the primary cause of infection with the least possible interference with the surrounding tissues. No attempt is made to wash away pus or to remove exuded lymph. (In very bad cases, as I shall show presently, removal of the appendix may be omitted.)

2. The provision of free abdominal drainage so as to relieve tension with all its accompanying evils. A Keith's tube inserted into the pelvis is usually sufficient, but it may be supplemented by others of indiarubber leading down to the site of the appendix and elsewhere.

3. Placing the patient on a sloping couch so that the shoulders shall be on a considerably higher level than the pelvis. Sufficient elevation is secured by placing the head castors of the bed on two kitchen chairs. The primary object of this posture is to permit of the descent of septic material towards the pelvic basin, where the rate of absorption by the lymphatic vessels is much slower than in the upper abdomen. It likewise enables the patient to breathe better and to more easily get rid of accumulations of gases in the stomach.

4. Giving large quantities of saline solution by the bowel. The large intestine, particularly the caecum, readily absorbs water, which is badly needed by the poisoned tissues, but which cannot be retained by the stomach. By introducing a large amount of water into the system it is contended that peritoneal absorption is not only arrested, but that, by a reversal of the stream, the poisons already taken up are eliminated.

The saline solution may be given continuously by means of a rectal tube with several terminal openings connected with a reservoir, which should be placed a few inches higher than the level of the rectum. The flow should be so adjusted that from one to two drops escape each second. Where the continuous method is inapplicable, or is irksome to the patient, it may be replaced by the intermittent plan, half a pint being very slowly introduced every two hours or so through a funnel and tube. In very bad cases anti-streptococcal serum may be given.

Secondary abscesses should be promptly evacuated and drained, and threatening intestinal obstruction met by immediate intervention.

Nothing should be given by the mouth for twenty-four hours or longer, and vomiting should be dealt with by washing out the stomach. Distension is relieved by turpentine enemata. Purgatives are unnecessary, the bowels acting naturally on the second or third day.

Murphy stipulated that in all cases of general peritonitis the source of infection, whether it be a ruptured gastric ulcer or a gangrenous appendix, must be dealt with.

In hospital practice one meets with not a few cases of neglected appendicitis, with wide peritoneal infection, where the patient is so very ill that even the minimum interference advocated by Murphy would almost certainly

hasten rather than retard the impending dissolution; and yet some of these cases may be rescued by the very simple procedure of making a suprapubic puncture, under local anaesthesia, and passing a Keith's tube down into the pelvic basin. Recovery is, of course, slow on account of the prolonged suppuration which necessarily accompanies Nature's method of shedding the gangrenous appendix; but I am firmly persuaded that several of my patients owe their lives to the restriction of operative measures to the extent I have indicated, combined with the other adjuncts to treatment that I have already mentioned.

The procedure can be carried out at once, without moving the patient to hospital or wasting valuable time in elaborate preparations.

The prospect of success in ruptured gastric and duodenal ulcers is less hopeful, but even in these cases it should be tried if more ambitious measures are out of court. Upwards of a year ago I saw with Dr. Buckley, of Chesterfield, a man who had a ruptured duodenal ulcer of forty-six hours' duration. There were all the evidences of diffuse peritonitis; the pulse was barely discernible, and the extremities were blue and cold.

Our surgical armament was, I think, a record in simplicity. It consisted of a razor in lieu of a scalpel, a piece of gas rubber tubing, a few forceps, and a saucepan. The patient, although he ultimately died, made a splendid rally, and seemed to justify for a time the hope that he might recover.

REFERENCE.
[1] Rose and Carless, seventh edition, p. 1124.

APPENDICOSTOMY IN DIFFUSE SEPTIC PERITONITIS.*

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IN the *Annals of Surgery* (February, 1906) Murphy of Chicago published an account of his now well-known method of treatment of diffuse septic peritonitis. In brief, this consists in rapid elimination of the cause of the peritonitis—for example, the removal of a gangrenous appendix; free drainage of the peritoneum by means of rubber tubes passed through the operation wound and into the bottom of Douglas's pouch through a suprapubic puncture; the assumption by the patient of the semi-sitting position after operation; the prevention of peristalsis by withholding all food and fluids by the mouth; and the introduction into the circulation of large quantities of fluid by absorption from the rectum. He claims that in this way the current in the lymphatics of the peritoneum is reversed, that membrane becoming a secreting instead of an absorbing surface, with the result that septic matter is washed away in the free flow that takes place through the drainage tubes. Further, toxins already in the blood are diluted and their elimination facilitated by the free diuresis that is induced. Murphy states that only one death occurred amongst the last 29 cases treated by him in this way.

Of the value of this method of treatment there can be no doubt. Success, however, largely depends upon the quantity of fluid that the rectum can be made to absorb. Murphy introduces a nozzle with three or four openings into the rectum, and attaches it by means of rubber tubing to a bag containing warm water. The bag is slung 3 or 4 in. above the plane of the rectum, so that the water runs in at very low pressure, and all distension of the bowel is avoided. I have attempted to carry out this treatment on many occasions, but have never succeeded in getting the rectum to absorb the large quantities of fluid that Murphy mentions. With the patient sitting in a nearly upright position it is almost impossible to prevent leakage through the anus. This not only stultifies the procedure but causes the patient a good deal of annoyance. In many cases also the rectum becomes very intolerant of the prolonged presence of the tube, and straining occurs. Many other surgeons whom I have specifically questioned upon this point appear to have experienced the same difficulty.

It occurred to me that the appendix might with advantage be utilized for the purpose of introducing fluid into the large bowel, and on several occasions I have done so with marked success. When the appendix is healthy—for example, in peritonitis following perforation of a gastric ulcer—an incision is first made over the lesion, which is rapidly treated in such a way as to prevent further contamination. No attempt is made to cleanse the peritoneum by irrigation or mopping, but adequate drainage is provided for, preferably by means of rubber tubes passed through the wound. Then, instead of making a suprapubic puncture to allow of the introduction of a rubber tube into Douglas's pouch, the abdominal cavity is again opened by a small vertical incision over the lower part of the right rectus, the fibres of which are separated. The appendix is pulled up into the wound, and the distal portion cut off. The stump is then fixed in the upper angle of the wound by one or two silk sutures passing through all its coats and the skin. The open mouth of the stump is thus practically flush with the skin, and through it a small rubber catheter is passed into the caecum. A large rubber drainage tube is finally passed to the bottom of Douglas's pouch through the lower part of the wound. The patient is then put back to bed, with the rubber catheter projecting through the dressings, care being taken to prevent it being accidentally pulled out. Finally, the patient is placed in the Fowler position, and the catheter connected by rubber tubing to a tank in which is warm normal salt solution. The tank stands on a table at the bedside, and should not be more than 3 in. above the plane of the caecum. The flow of water is regulated by a clamp on the rubber tubing.

If the peritonitis is secondary to disease of the appendix, the above procedure must be modified somewhat. An incision is then made over the appendix and its condition ascertained. If, as is often the case, the part nearest the caecum is comparatively healthy, the distal portion is cut off and the stump sutured to the skin, as already described. If this is impracticable, the appendix is extirpated in the usual way and a small portion of the caecal wall nearest the surface sutured to the skin. A puncture sufficient to admit the rubber catheter is then made in it. It is advisable in these cases to introduce a large rubber tube into the pelvis through a separate suprapubic puncture.

I use normal salt solution in preference to plain water, believing it to be less irritating to the mucous membrane of the bowel. Not more than 1 pint per hour is admitted in order to avoid distension, and care must be taken not to place the supply tank at too high a level. When absorption ceases, as much fluid is evacuated from the rectum as is introduced into the caecum, and the supply is then cut off. It is not necessary to leave in the catheter for more than forty-eight hours. At the end of that time it is withdrawn, the mucous membrane of the stump of the appendix is removed for a little distance down, and the opening closed by uniting the sero-muscular coats with a catgut stitch. Finally, any adhesions between the skin and the stump are gently broken down and the latter allowed to retract. In this way the risk of a faecal fistula is minimized.

In practice this procedure has many advantages over that employed by Murphy. It does not prolong the initial operation by more than two or three minutes. I have removed a gangrenous appendix, sutured the stump in the wound, and provided for drainage, with the patient on the operating table for only twelve minutes. The quantity of fluid admitted to the bowel can be regulated exactly, while the whole length of the large intestine takes part in its absorption. The patient suffers practically no discomfort, as no disturbance of bedclothes is necessary, and there is no leakage from the anus until absorption is at an end. Further, stimulants and nutrients can be easily and rapidly administered, if desired, by simply disconnecting the tank and connecting the catheter to a glass funnel into which they are poured.

Illustrative Case.

Mrs. A., aged 36, was admitted into the Queen's Hospital on August 4th, 1908. Three weeks prior to admission she had aborted, and two weeks later was seized with severe hypogastric pain, which had become much worse lately. When seen she presented the typical appearance of advancing peritonitis. The temperature was 103°, and the pulse 140, small, and thready.

* This paper was written before Mr. Keetley read his paper on the utility of the appendix before the Surgical Section of the Royal Society of Medicine. I believe no better example of the value of appendicostomy can be given than in the treatment of desperate cases of diffuse septic peritonitis.

The whole abdomen was rigid and tender, and the lower half tumid.

The abdomen was opened in the middle line, when a considerable quantity of brownish-yellow free pus escaped. The pus was not faeculent. On examining the pelvis an opening leading into an abscess cavity in the neighbourhood of the left Fallopian tube was found. Evidently the abscess had ruptured into the peritoneal cavity, and excited a generalizing peritonitis. The appendix, which was healthy, was cut across about 1½ in. from the caecum, and the stump fixed in the upper angle of the wound. A No. 6 rubber catheter was passed through the stump into the caecum. Two large rubber tubes were placed in Douglas's pouch, and brought out through the lower part of the incision, and the patient put back to bed. No attempt was made to cleanse the peritoneum.

The patient was propped up in the Fowler position, and a pint of warm saline solution passed into the colon every hour. Twelve hours later the pulse had fallen to 90, and was of good volume; the temperature was normal; the cheeks had filled out, and the patient looked and expressed herself as feeling very comfortable. The irrigation was kept up for twenty-four hours, during which time 24 pints of saline solution passed into the bowel. Of this, only about 5 pints escaped from the rectum. There was a copious discharge from the tubes, and a large amount of urine excreted. The catheter was withdrawn from the appendix, and on the second day the silk stitches connecting it to the skin were cut, and the stump allowed to retract. No escape of faecal matter occurred, then or later. Subsequent progress was uneventful, and the patient was discharged at the end of three weeks, with a single tube from which there was very little discharge.

APPENDICOSTOMY: WITH NOTES ON THE SURGICAL ASPECT OF COLITIS.*

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THE appendix vermiformis, which has occasioned a literature probably unequalled by that of any other part of the human system, seems of late to have, in some measure, justified its existence. Instead of being regarded as an unnecessary and dangerous possession, there have been found for it uses. The operation of appendicostomy, whereby the appendix is used to establish a temporary or permanent communication with the exterior, was first proposed in 1894[1] by Keetley, who suggested that by bringing the appendix through the abdominal wall and amputating the apex it might be used as a spout to relieve the distension of a case of obstruction occurring at a point below the caecum. He put this suggestion to the test during 1906. The credit of first performing the operation seems to be due to Weir, of New York, who in 1902[2] reported a case of ulcerative colitis upon which he performed the operation with marked success.

THE OPERATION.

The surgical procedure is simplicity itself. Nevertheless, although, as in Weir's original case, the appendix may conveniently present itself, yet if adhesions be present, if the organ is kinked, or if it passes behind the caecum, the operation may be long and difficult, rarely, however, should it be found impossible to liberate a sufficient length of well-nourished appendix to extend through the thickness of the abdominal wall. A small oblique incision, large enough to admit two fingers, is made through the abdominal wall in the region of McBurney's point. If the split flap method is used, the muscular fibres should be notched at right angles to their direction, otherwise the vessels in the meso-appendix may be so constricted as to cause sloughing of the organ. If the appendix is free it can at once be brought out through the wound; if, however, there are adhesions, or the appendix is for some reason inaccessible, the incision must be enlarged. The appendix should be pulled out until the caecum is flush with the parietal peritoneum, care being taken that there is no twist in its mesentery. Two fine silk sutures are inserted to secure the meso-appendix and the free border of the appendix to the edges of the incision in the peritoneum. The muscles are allowed to fall back, and if necessary brought into apposition with a loosely tied catgut suture. The skin incision is sutured, the last suture taking in the sero-muscular coats of the appendix protruding through one angle of the wound. A dressing of gauze and collodion is applied, covered by wool and bandage, and the patient returned to bed.

* Read before the York Medical Society.

Two or three days later the tip of the appendix is severed within ¼ in. of the skin and the appendical artery secured. The exposed mucous membrane is caught with fine catch forceps, dragged out a little and secured by one or two sutures to the edge of the skin. A rubber catheter is introduced into the caecum, and, if desirable, irrigation or other treatment can be at once proceeded with. If difficulty is experienced in passing the catheter, one designed by Mr. Keetley, having a tapering solid end extending beyond the eye of the instrument, can be used. Beyond a slight risk of infecting the wound, there is no reason why the appendix should not be opened and a catheter introduced at the time of the operation, if immediate entry is required. Should the lumen be small, it is very easy to dilate it gradually to admit a No. 10 or 12 English. It is desirable to leave the catheter in continuously during the first ten days to overcome any tendency to contraction on the part of the wound producing stenosis of the appendical lumen. Later it is sufficient to pass the catheter once daily.

There are several difficulties which may arise in the operation:

1. In the first appendicostomy I saw performed the surgeon, accustomed to appendicectomy, inadvertently tied part of the meso-appendix. Subsequently the distal end of the appendix sloughed below the level of the skin, but, fortunately, not below the level of the muscular layers. The only consequence was a great tendency of the opening to close.
2. A similar condition occurred in another case, in which the appendix was kinked upon itself in such a manner that only sufficient was obtained to just reach the skin margin.
3. When the tip is amputated, unless the mucous membrane is secured to the skin edge at once, it retracts within the sero-muscular coats, and a tendency to stenosis arises.

THE POSSIBILITY OF THE OPERATION.

The question naturally arises whether there may not be a percentage of cases in which the appendix is so situated as to render appendicostomy impossible; in 100 autopsies at St. George's Hospital the appendix was a fibrous cord without a lumen in 2; in 2 the lumen admitted a bristle only; in 96 appendicostomy would have been possible.

INDICATIONS FOR APPENDICOSTOMY.

The following classification is modified from that of Jacobson and Rowlands.[3]

Appendicostomy may be performed:

1. For irrigation and medication of the colon.
2. For obstinate and protracted constipation.
3. For drainage of the caecum and relief of abdominal distension.
4. For nutritive purposes.
5. For irrigation and medication of the lower ileum.

THE SURGICAL TREATMENT OF COLITIS.

The terms, colitis or enteritis membranacea, pseudo-membranacea, pellicularis, tubularis, muco-membranacea, crouposa, fibrinosa, pseudo-enteritis, catarrhus desquamativus, diarrhoea membranacea, tubularis, etc., have been invented, but to my mind the condition is one simply of a mucus secreting, epithelium covered membrane subject to inflammatory reaction of various degrees. There are, however, rare forms of colitis dependent upon definite and well recognized general constitutional disorders which do not come within the scope of this paper. Such are the colitis due to injury, pyaemia, diabetes, Bright's disease, purpura, scurvy, amyloid degeneration, venous or arterial stasis, and spinal cord lesions.

In dealing with colitis due to local lesions the question of some form of classification arises. The following is simple, and I think sufficient:

Simple acute.
Simple chronic.
Ulcerative acute.
Ulcerative chronic.

Whilst there are distinct cases both of simple and ulcerative colitis, yet the demarcation between these two varieties is by no means well defined. A simple inflammatory condition of the colonic mucosa may or may not proceed with greater or less rapidity to definite destruction of the mucous epithelium. Cases brought under notice in

this intermediate stage have received names, some describing the macroscopic appearance, such as "follicular colitis," "granular colitis," "colitis punctata," and some suggesting an underlying nervous origin, such as "colica mucosa" and "nervous colitis."

I have avoided the use of the word "membranous," since the shreds and casts which, in some cases, are passed, have been conclusively shown to be inspissated mucus, containing a few epithelial cells and no leucocytes.

Acute simple colitis is a condition similar pathologically to acute pharyngitis. It may react to treatment or passes on to acute ulcerative colitis, or subsides into chronic simple colitis.

Chronic simple colitis may be a sequela of acute simple colitis, or may arise without any apparent acute stage. It is similar pathologically to hypertrophic rhinitis, and has been called "colitis hypertrophica." It is justifiable to use the term "chronic simple colitis" when on examination with the sigmoidoscope the mucous membrane of the sigmoid is seen to be thickened, oedematous, and discharging copious mucus without ulceration. There may, of course, be some ulcers higher up which will account for the condition; but since it has been shown that in colitis the most marked destruction and damage occurs at the sigmoid, the absence of evidence there is sufficient for clinical purposes.

Acute ulcerative colitis is theoretically a sequela of acute simple colitis, but the inflammation may be so intense as to produce ulceration practically from the onset. Dysentery, due either to Shiga's bacillus or to the *amoeba*, is the commonest form of acute ulcerative colitis, but the condition may occur without either of the above organisms being present.

Chronic Ulcerative Colitis.—The ulceration may be superficial and punctate, consisting of erosions, or it may be extensive, serpiginous, and progressive, passing on to pericolitis, abscess, or to perforation. This form of colitis resembles the various forms of gastritis and gastric ulcer.

Mucous Colitis with Casts.—The so-called muco-membranous colitis of nervous origin has been attributed to various causes by different authorities.

(*a*) Einhorn ascribes it to enteroptosis, and considers it a common associate of achylia gastrica.[4]

(*b*) Glenard considers it due to enteroptosis, which, by dragging on the bile passages, produces an alteration in bile tension and flow, causing a diminished secretion of mucus, which favours precipitation of mucin by acids in the intestine.[5]

(*c*) Geoffroy regards enterospasm as the chief underlying cause.[6]

(*d*) Letcheff and Akerlund give disease of pelvic organs a prominent place in the etiology.[7]

(*e*) Vanni, Mannaberg, and others adhere to the view that coprostasis is the predecessor of the condition.[8]

(*f*) Von Noorden regards constipation as the exciting cause, but only in neurasthenic and hysterical subjects.[9]

(*g*) Nothnagel prefers to consider the phenomena as due to hypersecretion of mucus from anatomically sound mucosa.[10] Nothnagel quotes a case of a boy of 16 who in the course of acute endocarditis had a spinal embolism; in addition to the paraplegia, retention of urine, etc., which resulted, for several days he passed ½ litre of clear thin mucus through his paralysed sphincter ani. No one who has appreciated the full distress of waiting to be called to a dreaded viva voce examination will deny the existence of nervous control over the movements and secretion of the colonic mucous membrane; but it is another thing to ascribe colitis of this type to a nervous origin. Since this is not a fatal disease *post-mortem* information is scanty, but that which Nothnagel himself presents is not at all conclusive.

Jagic and Weigert[11] describe a case of a woman, aged 48, who had had symptoms of colitis with passage of casts, and who died from diabetic coma. *Post mortem* the pancreas was atrophic; the kidneys, one atrophic and the other hypertrophic; the stomach and small intestine were normal; the large intestine contained faecal masses, and the mucous membrane was striated with adherent white viscous material, which on staining was shown to be mucin. There were no macroscopic signs of inflammation. Lieberkuhn's crypts were distended, and the goblet cells swollen and broken off; but on microscopical examination the tissue round the crypts was found infiltrated with round cells in greater quantity than normal. Especially was this the case where the secretion of mucus was most abundant.

Pye-Smith[12] quotes the case of a woman of 50, who passed mucous casts for two years. Casts were found *in situ* after death, and could be washed off, showing a normal mucosa underneath. There was, however, a carcinomatous stricture in the sigmoid.

Rothmann's[13] case had passed mucous casts for some time, and had been treated with rectal irrigation without improvement. The woman died of carcinoma of the base of the skull. *Post mortem*, the large intestine was found to contain some faecal masses and thickened viscous mucus adherent to an obviously reddened and inflamed mucous membrane. An interesting point in this case was that the mucosa of the ileum was also inflamed, but without adherent mucus, thus tending to show that the inflammation was the primary condition.

Edwards[14] describes a case of a man aged 71 who passed casts in his stools. He died of meningitis. No macroscopic change could be found in the mucosa, but a microscopic examination was not made.

Thus we find that of four cases of colitis with casts, in which a *post-mortem* examination was made, two showed inflammatory phenomena in the mucous membrane, in one there was a carcinomatous growth in the sigmoid, and one showed no change in the mucous membrane when examined macroscopically.

In a recent paper Lockhart Mummery[15] gives particulars of 9 cases of colitis with passage of casts which he had under his care. The analysis of these cases provides the following figures:

Total number of cases 9—
Female 7. Average age 41.7 years.
Male 2. Average age 46 years.

Careful sigmoidoscopic examination revealed the following conditions:

No cause found	1 case
Chronic inflammatory condition of mucosa resembling that of granular pharyngitis	3 cases
Similar condition, but in addition shallow ulcers scattered over mucous membrane of rectum and sigmoid ...	1 case
Adhesions binding down sigmoid flexure	1 case
Cancer of sigmoid flexure	2 cases
Retroflexed uterus pressing on rectum...	1 case

It is such evidence as this that makes the position taken up by Nothnagel untenable. Apart from those cases showing a definite organic change, such as adhesions or new growth, the sequence of events seems to have been as follows:

1. Obstinate and protracted constipation almost always.
2. Possibly ingestion of drastic and irritating purgatives.
3. A catarrhal inflammatory condition of the mucosa.
4. Chronic ulceration of the colon of varying extent and depth, in some cases.

The influence of enteroptosis may be a primary one, producing or helping to produce the constipation, or the displacement of the viscera may be in part due to the retention of faecal matter. The average age of women, 41.7, is one at which a relaxed abdominal wall is common, for want of tone in the abdominal muscles is given an important place in the etiology of enteroptosis by Keith in his Hunterian Oration[16] upon this disease.

The theory of nervous influences as a cause of mucous colitis seems to depend to no small extent upon the fact that it is a disease commonly associated with other neurasthenic symptoms. When the profound nervous phenomena which may accompany haemorrhoids are remembered, it is not surprising to find a similar condition in patients, usually women, suffering from obstinate constipation followed by diarrhoea and the passage of much mucus, possibly with severe pain.

TREATMENT.

A.—*Of Acute Simple Colitis.*

There are two points to which I should like to draw attention.

1. The Diet.—It is usual to put patients upon what is either strictly or approximately a pure milk diet. Whether this is satisfactory is very doubtful. The object of dieting in colitis is to produce faeces which shall be the least irritating to the inflamed mucosa. A milk diet, whilst leaving a small residue, produces faecal masses which are small, globular, very fine, and undoubtedly irritating to the colon, which has to undergo prolonged and strong contractions to pass along such small masses. Since they do not produce an efficient distension of the bowel they are apt to remain too long in contact with the mucous membrane. As a remedy for this von Noorden recommends a liberal diet of food which leaves a bulky residue of cellulose, articles such as brown bread and vegetables being freely given, together with a daily allowance of cream or other highly fatty material, producing motions which, being bulky, soft, well lubricated, and unirritating, are easily voided from the colon. I have seen a patient who, when upon a milk diet, passed small hard faeces with pain and distress, able under von Noorden's diet to empty his colon of bulky masses without trouble.

2. Intestinal Antisepsis.—The value of so-called intestinal antiseptics has always been a matter of argument. I have had bismuth, salol, beta-naphthol, cyllin, turpentine, and calomel, and of these calomel given in fractional doses continuously is the only one which has had apparent effect. The work of Metchnikoff upon the fauna and flora of the large intestine is well known, and he contends that by the introduction of milk curdled by a fresh culture of the lactic acid bacillus, an organism antagonistic to those inhabiting the great intestine is brought into the alimentary canal. I have had the opportunity of trying this method in 3 cases. In 2, two women, aged about 35, both suffering from mild colitis, with some abdominal pain and regular passage of mucus four or five times a day, the results were most satisfactory. Nothing definite could be seen with the sigmoidoscope. They were given half a pint daily of milk curdled by a pure culture of *Bacillus lactis*, and were placed upon von Noorden's diet. At the end of fourteen or fifteen days both patients were relieved of their symptoms. The third patient was an almost hopeless case of ulcerative sigmoiditis, who refused appendicostomy. A transient improvement in temperature and pulse were the only results of the treatment.

B.—*Acute Ulcerative Colitis.*

The treatment of these cases along purely medical lines seems to me unscientific and unsatisfactory. The ideal treatment would be to keep the colon empty and at rest. That, unfortunately, is impossible, for to stop all food by the mouth is to starve the patient and reduce his power of resistance. To feed him by the rectum is to irritate and stimulate the diseased part. It is impossible to prevent the entry of gastric, hepatic, and pancreatic secretions, and the constant evacuation of mucus and blood precludes the possibility of resting the colon. By the operation of appendicostomy, however, the large intestine can be completely emptied once or twice daily, and mild medicinal lotions can be introduced into the whole length of the great gut. Moreover, by the removal of the toxic secretions of the diseased mucosa autointoxication is in no small measure prevented.

Dr. W. Murrell,[17] in the *Lancet* of March 12th, 1904, reported 5 cases of acute ulcerative colitis at the Westminster Hospital as follows:

Males 3. Average age 25.6 years.
Females 2. Average age 33.5 years.
Deaths 4. Average length of illness six months.
Recovery 1. Length of illness ten months.

These patients were treated upon medicinal lines, and they one and all showed similar symptoms: Temperature 100° to 102° F., pulse 120 to 140, and ten to thirty motions a day, with abdominal pain and tenderness, accompanied by progressive weakness. In the course of treatment the following drugs were used: Opium and morphine in all forms, bismuth carbonate, lead acetate, perchloride of iron, beta-naphthol, salol, perchloride of mercury, ipecacuanha, and formaldehyde by mouth, and rectal injections of silver nitrate. In one case an appendicostomy was attempted and found impossible owing to adhesions, so that an enterostomy was done. This was, however, only undertaken after an illness of eleven months, when the patient was extremely weak.

On the other hand, Mr. Holton C. Curl[18] reported 11 cases of dysenteric colitis in which either an appendicostomy or a caecostomy had been performed early, with 8 recoveries and 3 deaths; 2 of the fatal cases had extensive ulceration associated with nephritis, whilst the third was moribund when the operation was performed.

I should like to mention a fatal case which I had under my care at St. Mary's Hospital last year, because I now feel that, had appendicostomy been performed early, the result would have been different:

A woman, aged 60, was admitted with typical symptoms of acute ulcerative colitis. The temperature was intermittent, with an excursion of 3 to 4 degrees. The pulse remained above 100 continuously. She passed blood and mucus mixed with faecal material ten to twelve times a day. Intestinal antiseptics of various kinds were tried by the mouth, and rectal irrigation with various lotions. There was little or no improvement, and after an illness of two to three months the patient suddenly developed symptoms of general peritonitis and died within forty-eight hours. *Post mortem* the peritoneum was found bathed in pus, and a perforation discovered just below the hepatic flexure of the colon. There was deep extensive ulceration of the colon, which had perforated at the point mentioned.

C.—*Chronic Ulcerative Colitis.*

It is for this condition that the operation of appendicostomy is most useful, whether a sequela to acute ulcerative colitis, or to chronic constipation coupled with the ingestion of irritating drugs, matters not. The symptoms may be severe or slight, being those of excessive mucus secretion from the large gut, the mucoid evacuations being possibly stained with blood, progressive but slow loss of weight, and pain and tenderness in the region of the great intestine, especially over the sigmoid flexure. Sigmoidoscopic examination usually shows one of the following conditions:

1. Superficial ulceration without destruction of the submucous tissue.
2. Discrete punctate ulcers in which the submucous tissue is involved.
3. Large irregular serpiginous ulceration with destruction of submucous coats.

The frequent calls to stool, the abdominal discomfort, the passage of blood by the rectum, the failure of medicinal treatment, all tend to reduce the patient to a state of neurasthenia and chronic invalidism. Appendicostomy by completely clearing the great gut daily, removing the excess of mucus, and leaving a medicated lotion in the colon, tends to that rest and cleanliness which is essential for healing.

I have been able to find records of 10 cases of chronic ulcerative colitis for which the operation of appendicostomy has been performed, including two which came under my own personal observation.

CASE I.

A fish hawker, aged 26, who had been a soldier, and had had two attacks of acute dysentery—in Africa in 1900, and in India in 1906—complained of six to eight motions of blood and slime daily, without pain, and no marked emaciation. His general condition was excellent; the sigmoidoscope showed considerable oedema of the submucous tissue, with chronic inflammation of the mucous membrane and superficial ulceration, especially marked on places exposed to friction, such as the edges of the rectal folds.

Appendicostomy was performed on July 23rd, 1907, by Mr. Swinford Edwards. Four days later irrigation was started, 6 pints of weak boracic lotion being slowly allowed to flow through the catheter into the caecum. A moderate-sized vulcanite tube was passed through the sphincter for about 3 in. The inflow was regulated so as not to allow of too great distension, and abdominal massage along the course of the great gut employed. After about six minutes the lotion began to flow from the rectum, bringing with it fragments of faeces. Before the outflow began and when the patient's abdomen was distended and tense the catheter was removed from the appendix, and, though no protection against backflow was taken, there was no trace of leakage, the muscular coat and the valve of Gerlach proving competent to prevent any escape of the lotion. After four days the lotion was changed to one of sodium bicarbonate, gr. x ad ℥j, and this was changed after two days more to one of protargol, gr. iv ad 1 pint. The patient remained in hospital one month, and was taught to conduct the irrigation himself. It was found that after a few days the rectal tube was unnecessary, the patient evacuating the lotion as soon as the colon became moderately distended. He was sent home with an abdominal belt fitted with a flat, thin pad—a contrivance found to be unnecessary in subsequent cases.

After two months' self-irrigation daily with 6 pints of protargol lotion, he was again examined with the sigmoidoscope on October 29th, 1907. The mucous membrane was found to be slightly inflamed, and there was still some oedema of the submucous tissue, but no sign of ulceration. The patient himself stated that he was perfectly comfortable and at work; he occupied himself for half an hour every morning with the irrigation, and after that had no further trouble during the day. Throughout his diet was his usual one, and the only other treatment was the administration of gr. ½ of calomel three times daily while in hospital.

CASE II.

A man aged 42, under the care of Mr. Rawlings, of St. Bartholomew's Hospital, to whom I am indebted for permission to quote the case, presented similar symptoms, except that the diarrhoea was more marked, there being about nineteen or twenty evacuations daily, and that the emaciation and weakness were severe.

Appendicostomy was performed, and the colon irrigated daily with astringent lotions. After two months the patient was free from trouble, continuing the irrigations himself, and being free from any evacuation after the washing was completed. He was delighted with the result, and had put on weight rapidly.

CASE III.

Dr. Robert F. Weir[19] performed appendicostomy for ulcerative colitis in 1902. This is the first reported case of this operation.

CASE IV.

Mr. Stretton,[20] of Kidderminster, reported a case in 1906.

CASE V.

Mr. H. M. W. Gray,[21] of Aberdeen, reported one case in 1904, with satisfactory result.

CASE VI.

Dr. Robert H. W. Dawbarn[22] reported one case, resulting in cure, in 1905. The lotions used for irrigation were 10 pints of $\frac{1}{1000}$ solution of potassium permanganate, alternating with a similar quantity of normal saline solution.

CASE VII.

Mr. Hutchinson,[23] of London, reported a case resulting in cure in 1905.

CASE VIII.

Sir William Bennett[24] recorded a satisfactory case in 1905.

CASE IX.

Mr. Stanmore Bishop,[25] of Manchester, reported a satisfactory case in 1905.

CASE X.

A man, aged 42, under the care of Dr. Foxwell at the Queen's Hospital, Birmingham, who had been ill for three months, complained of pain, diarrhoea of blood-stained mucus. His serum clumped a culture of Shiga's bacillus in a dilution of 1 in 40, but not 1 in 100.

He was operated upon on March 16th, 1908, and washing out was commenced ten days later. Within a week his condition was improving, the pain was absent, and the diarrhoea less. A month later he was well and having a single well-formed motion daily.

D.—*Chronic Simple Colitis.*

Under this heading I place those cases in which there is a passage of mucus with the faeces and independently, but in which no sign of ulceration can be seen with the sigmoidoscope. I include also those cases of colitis with casts in which I can find no record of sigmoidoscopy. I do not consider the passage of casts a sign of simple chronic colitis, for I am convinced that casts may occur in all forms of colitis, and it is only by the use of the sigmoidoscope that a definite statement as to the condition of the mucosa can be made. There seems to be no satisfactory explanation why casts should form in some cases any more than there is any reason given for the fact that in some patients the mucus secreted by an inflamed pharynx should take on a membranous appearance. A hypertrophic form of colitis with abundant mucus can be recognized by the sigmoidoscope, and I very tentatively suggest that colitis with casts may be of the nature of an atrophic form.

I have collected the following cases, the first two coming under my own care when house-surgeon at St. Mark's Hospital:

CASE XI.

A woman, aged 38, married, two children. Abdominal examination revealed some tenderness over the sigmoid, and possibility of palpating both kidneys. The sigmoidoscope showed an inflamed mucosa with abundant secretion of mucus. Mucous evacuations nine to ten daily. No blood passed per rectum. Loss of weight.

Appendicostomy was decided upon because the patient had received some months' treatment by drugs and rectal injections without avail. The operation was performed on June 18th, 1907, by Mr. Swinford Edwards. The treatment and irrigations used were similar to those in Case I. The patient was discharged on July 13th, 1907, and self-irrigation conducted until October 29th, when she was again examined with the sigmoidoscope. The bowel was found healthy, with no inflammation or excess of mucus. She stated that she was quite well, had increased in weight, and found no inconvenience either from the daily wash-out or the presence of the fistula.

CASE XII.

A man, aged 35, was admitted for perianal papillomata, which were removed. For two previous years he had been treated with rectal injections, for mucous diarrhoea, with four to five evacuations daily, associated with some pruritus ani and the growth of the papillomata. There had been some blood with the mucus at times. Sigmoidoscopy showed chronic inflammation of mucosa with granular patches.

Appendicostomy was performed by Mr. L. Mummery on September 10th, 1907. Treatment was similar to that of the previous case. After one month the patient had lost the slight abdominal pain present before operation, and after his daily wash-out had no further trouble throughout the day. I have no record of a sigmoidoscopic examination after the operation.

CASE XIII.

Gray[26] of Aberdeen in 1904 reported a case of a woman with frequent evacuations and passage of casts. Appendicostomy produced a cure in four weeks. There was a slight tendency to relapse twenty months later.

CASE XIV.

Morley Willis[27] in 1906 reported a case of colitis with mucus but no casts in a woman aged 32. Appendicostomy produced much improvement in one month.

CASE XV.

Donald Armour[28] reported in 1908 a case of colitis with casts satisfactorily treated by appendicostomy.

CASE XVI.

Moynihan[29] recorded a case of colitis with casts cured by appendicostomy in 1905.

I would make an urgent plea for the more general and regular use of the electric sigmoidoscope. I am convinced, not only of its utility, but also of the necessity and advantage of its use in all cases presenting the symptoms of colitis in however slight a form. Apart from the accurate diagnosis of the cause of the mucous discharge, it has been the means of obtaining information of great value both to the patient and surgeon. It is well known that certain forms of carcinoma recti produce no symptoms beyond a mucous discharge, possibly blood-stained, and a vague sense of uneasiness in the lower abdomen—an aggregation of signs common to several forms of colitis. Should the growth be situated near the junction of sigmoid and rectum or opposite the third piece of the sacrum, it cannot be felt either with a finger in the rectum or by abdominal examination. Cantlie[30] has recently shown that the point of junction of the pelvic colon with the rectum is marked by a narrowing of the lumen of the gut, and by a thickening of the muscular coat approximating to a sphincter, to which he has given the name "sigmo-rectal pylorus." This constriction, and the increased friction and trauma produced thereby, may be an explanation for the occurrence of carcinomata at this site.

I can call to mind 3 such cases admitted to St. Mark's Hospital last year—cases which presented symptoms suggestive of ulcerative colitis, discharge of blood and mucus, and slight abdominal discomfort attended with little or no difficulty of defaecation. In all these cases the sigmoidoscopic examination revealed the presence of a malignant growth at the position mentioned, although the carcinoma could not be reached by bimanual examination. These 3 cases had been under medicinal treatment for colitis for some time.

The discharge of excessive mucus, with or without blood, from the rectum, is not a disease but a symptom, and it is only in accordance with modern surgical exactness to endeavour in all cases to diagnose accurately the pathological condition producing such symptoms.

Mr. L. Mummery,[31] in a recent paper, published 36 cases, all of which had symptoms of colitis; mucus being present in the stools in all, blood in 22 cases, casts in 8 cases, intestinal sand in 2, and enterospasm in 1 case. The use of the sigmoidoscope in all 36 cases revealed the following conditions:

- 11 cases showed inflammation of the mucosa without ulceration;
- 7 cases showed ulceration;
- 7 cases showed malignant disease;
- 3 cases showed inflammation with constriction due to peritoneal adhesions;
- 1 case showed inflammation due to the pressure of a retroverted uterus;
- 1 case showed inflammation with presence of a polypus high up;
- 6 showed nothing to account for symptoms.

Beck,[32] in 500 cases of chronic colitis, found inflammatory lesions in the colon in 394, or 78.8 per cent.

APPENDICOSTOMY FOR CHRONIC CONSTIPATION.

The question of surgical interference in cases of protracted constipation is one which crops up periodically, mainly on account of the work of Mr. Arbuthnot Lane. So much depends upon what degree of derangement of function is understood by the words "chronic" or "protracted." Mr. Lane does not lay down any clear definition of what he considers sufficient indication for operation. He talks of the auto-intoxication due to coprostasis, which surely is an elastic term, including the headache following a day's irregularity or the profound toxaemia seen in patients who allow weeks to elapse without relieving their abused colon.

Ordinary chronic constipation which necessitates the regular use of aperients, enemata or suppositories, is amenable to medical and hygienic treatment, but there are some few protracted cases in which perhaps fourteen days to three weeks may elapse between the acts of defaecation, in which the usual medicinal remedies produce no other result than abdominal distension and discomfort, and in which the early signs of irritation to the mucosa are manifest, where surgical interference is fully justified.

If the surgeon decides to operate, he may perform (1) ileo-sigmoidostomy, (2) ileo-sigmoidostomy with colectomy,

(3) appendicectomy with liberation of adhesions, (4) appendicostomy, (5) valvotomy.

The first two procedures are associated with the name of Mr. Lane, who has, however, practically abandoned ileo-sigmoidostomy alone for the more formidable operation of removing the great gut as far as the lower portion of the sigmoid flexure.

An analysis of Mr. Lane's recently published results[33] shows the following:

Total number of cases	...	...	...	...	39
Total number of operations	...	...	...	...	80
Average number of operations per patient				...	2.05
One patient underwent	...	...	...	9	operations
One ,, ,,	...	...	...	7	,,
One ,, ,,	...	...	...	5	,,
Three patients ,,	...	...	...	4	,,
Six ,, ,,	...	...	...	3	,,
Two ,, ,,	...	...	...	2	,,

All these operations were not performed by Mr. Lane himself, some having been done prior to Mr. Lane's treatment. Most, however, were for adhesions or some manifestation of enteroptosis.

Results.

Number of cases	39
Satisfactory recoveries	19, or 50 per cent.
Imperfect recoveries, patients still having intestinal symptoms or needing enemata, etc.	9, or 23 per cent.
Bad results	2, or 4 per cent.
Deaths (total, 9, or 23 per cent.):	
Immediate...	7, or 17.9 per cent.
Remote	2, or 5 per cent.

Causes of Death.

Immediate, 7—death occurring at an average of 8.7 days after operation:

1. Suppuration in wound with perforation of intestine.
2. Shock and vomiting.
3. Shock.
4. Bronchitis.
5. General peritonitis.
6. Intestinal obstruction.
7. Perforation of gastric ulcer.

Remote, 2:

1. Complete relapse and death after one year.
2. Acute obstruction (no autopsy) after seven months.

The question to decide is whether a palliative operation, which in such skilled hands yields a total death-rate of 23 per cent., of which 18 per cent. is accounted for by the immediate results of surgical interference, is justifiable, especially when only 50 per cent. of cases so treated are given satisfactory relief.

To amputate the appendix and sever adhesions in a case of protracted constipation is too much of a shot in the dark. The appendix may be, and commonly is, the seat of extensive adhesions, the division of which with any other similar constricting bands may relieve the patient completely, but there can be no certainty that such will be the case. On the other hand, by utilizing the appendix to make a path whereby the large intestine can be reached for lavage or direct medication is surgically sound.

This method renders it possible to destroy any adhesions present, whilst at the same time the appendix ceases to be a dangerous possession, and is put to a valuable use. The procedure after the operation is to empty the colon by douches, preceded if necessary by small injections of olive oil to soften the faecal masses. I can only quote one case in which this method has been tried, but with a most satisfactory result.

Murray[34] in 1905 first suggested appendicostomy for protracted constipation, and later in the same year Keetley[35] performed the operation. His case was that of a young girl aged 15, who was subject to most obstinate coprostasis, which medicinal treatment failed to relieve. When seen by Mr. Keetley the bowels had not been emptied for fourteen days, and the patient showed signs of considerable toxaemia. Appendicostomy was done; the transverse colon, loaded with faecal masses, was found to descend below the umbilicus. After the introduction of warm olive oil, followed by a large injection through the appendix of a warm solution of magnesium sulphate, the patient passed with considerable pain and difficulty a great quantity of faecal material by the rectum. After this initial evacuation the daily introduction into the caecum of about ʒx of warm magnesium sulphate solution, and later of warm water alone, enabled the patient to have an easy and normal motion. The appendical opening gave no trouble, and the transverse colon became gradually less pendent. The patient would not, up to the time the case was reported, allow the opening to be closed, so that it is not possible to say if the daily lavage of the colon had a curative effect.

Inasmuch as the ptosis of the transverse colon tended to remedy itself, and as the regular distension and evacuation of the colon would constitute a sort of physical exercise for the gut, there are grounds for the opinion that the operation may have had a curative effect upon the lethargic intestinal muscles.

Valvotomy.

The procedure of incising the valves of Houston for chronic constipation comes to us from America. It has not been proven how far these plications produce arrest of faeces. The fact that they do not exist in quadrupeds seems to suggest that they have some function associated with the erect posture. It is possible that in a few cases one or more of the valves may be hypertrophied, so that good results may follow division.

Given, therefore, a case of protracted and obstinate constipation, for which surgical measures are indicated, we have the choice of two methods—one, ileo-sigmoidostomy, which in skilled hands gives a death-rate of 23 per cent., or appendicostomy, which our knowledge of appendicectomy leads us to believe would yield a death-rate of under 1 per cent.

Appendicostomy for Drainage of the Caecum and Relief of Abdominal Distension.

The use of this operation in cases of distension depends so much upon the exigencies of the moment that it is not possible to lay down any rules or indications. I have collected 3 cases, however, which indicate its scope in various abdominal conditions.

The suggestion that the appendix might be used as a spout for the relief of intestinal obstruction was first made by Keetley in 1894,[36] and put to the test by that surgeon in 1906.[37]

The case was one of carcinoma of the greater curvature of the stomach, involving the transverse colon and causing obstruction therein. Appendicostomy was performed, and a few days later the lumen was gradually and successfully dilated until it admitted a No. 4 rectal tube. Through this the intestinal contents drained well, the colon below the obstruction being emptied by enemata. Later the gastric carcinoma produced obstruction of the pylorus with the usual signs of stenosis and dilatation of the stomach. Jejunostomy was then performed, through which the patient was fed. The patient lived for three and a half months, being fed directly into the jejunum and having the bowels evacuated through the appendix. Death was due to the progressive malignant cachexia, but was unaccompanied by the distress of either gastric dilatation or intestinal obstruction.

Jacobson and Rowlands[38] mention a case of volvulus of the caecum operated on by Mr. Maunsell, in which after unfolding the volvulus he performed appendicostomy, the result being that he effectually anchored the caecum and so prevented a recurrence, and also was able to clear the large intestine of faeces for the introduction of hot saline to combat shock.

Mr. Keetley[39] in 1905 operated upon a child aged a year and ten months for intussusception of the ileo-caecal variety. After reduction he performed appendicostomy, the advantages he claimed for the procedure being: (1) Evacuation of bowels, (2) prevention of recurrence, (3) rest given to caecum, (4) facility of giving saline fluid.

Appendicostomy for Nutritive Purposes.

It has been suggested that this operation might be performed and the opening utilized for feeding. The unsatisfactory results of prolonged rectal feeding are so well known that the suggestion seems worthy of consideration. The operation *per se* is practically free from danger, and allows nourishing fluids to be passed into the colon, whence there is considerable absorption. It can at least be safely assumed that the amount of nutriment taken into the circulation would be greater than in the case of rectal enemata. This is borne out by the experiments of Goodard,[40] who showed that 10 per cent. of fat ingested is absorbed in the great intestine. The cases for which such treatment would be suitable are mainly those of ulceration or new growth of the stomach in which rest to that viscus is indicated. Since the patient has to undergo an operation, it would seem more reasonable at once to perform a gastro-enterostomy and not attempt the purely palliative measure.

It is possible, however, that there are cases in which appendicostomy for purely nutritive purposes would be useful, such as those in which, either through perigastric adhesions or previous operative measures, gastro-enterostomy is not possible, and those of profuse haematemesis, in which surgical interference with the stomach itself is dangerous.

APPENDICOSTOMY TO PERMIT DIRECT MEDICATION OF THE LOWER ILEUM.

It has been suggested by Ewart[41] that use might be made of this operation to reach the lower portion of the ileum. He proposes it for the surgical treatment of typhoid fever. He was able, both in the cadaver and in the living subject, to pass a catheter through the ileo-caecal valve for some 6 to 8 in., and so to irrigate the bowel. He used a Jacques catheter mounted on a stilette of soft pliable copper, bent at a suitable angle.

I can find no record of this suggestion being put into practice, and how far it is justifiable I do not know. Since the typhoid bacillus is, during the course of enteric fever, present in the mesenteric glands, the spleen and other viscera, it seems unlikely that the most thorough irrigation of the ileum, would do much to lessen the toxaemia. Possibly healing of the ulcers might be hastened, and any tendency to perforation diminished.

CONCLUSION.

The foregoing are the uses to which this operation has been or it has been suggested might be put.

The use of appendicostomy for colitis was preceded by the operations of right inguinal colostomy and caecostomy. Right inguinal colostomy is not easy to perform; it is difficult to close satisfactorily, and places the patient in a most unenviable position. The constant flow of fluid, irritating faeces over the surface of the wound and surrounding skin, soon to become excoriated and sore, is most distressing, requires the constant attention of a nurse, and prolonged sojourn in bed. It is true that by this operation the faecal stream is entirely directed away from the colon, which is thereby given greater rest; but the complete daily evacuation and irrigation possible with appendicostomy seems to be sufficient for the purpose. Cases of colitis have a well-known tendency to relapse, and it is not easy to decide when to close the colostomy wound, for, having once closed it, the opening is not readily re-established. Thus, Hale White and Golding-Bird reported a case of colitis treated by this operation, which relapsed two years after the closure of the colostomy opening. With appendicostomy, however, if, after treatment has been stopped, the opening be allowed to stenose naturally, which it will readily do, it gives no trouble, and can be dilated at a later date with suitable bougies, presence of the mucous membrane preventing complete closure of the fistulous tract. For very similar reasons the operation of caecostomy has, in my opinion, been superseded by appendicostomy. Caecostomy is more difficult to perform and more difficult to close. There is practically always some leakage of faeces, and the result for the patient is unsatisfactory. When done to divert the intestinal contents from the colon the result is imperfect, since the diversion is incomplete.

It is interesting to note that the first use of the appendix for irrigation purposes was the result of an unlooked-for incident. Weir was about to perform a caecostomy, but in opening the abdomen the appendix presented itself so opportunely that he utilized it in the way stated.

I have quoted 20 cases in which the operation of appendicostomy has been performed, 4 of which have come under my personal notice and supervision. Summarized, they are as follows:

For ulcerative chronic colitis	10
For simple chronic colitis	6
For protracted constipation	1
For other abdominal conditions	3

This does not take into account the cases reported by Curl, for I was unable to determine in how many he performed appendicostomy and in how many caecostomy.

In all the cases the operation was successfully performed, and was of marked benefit to the patient. In the cases of colitis the following results were obtained:

For ulcerative colitis:	
Total cases	10
Cures obtained	9
For simple chronic colitis with and without passage of casts:	
Total cases	6
Cures obtained	3
Much improvement after one month... ...	1
Apparent cure in four weeks with slight tendency to relapse twenty months later...	1
Cure after six weeks, no subsequent history	1

Of untoward events following operation I have found no report. In my own experience of the procedure I met with three small misadventures which may be of interest:

1. Stitch suppuration in those cases in which the appendix was opened on the table.
2. Through the carelessness of a nurse a catheter was allowed to slip into the caecum. It was passed per rectum without any discomfort within twelve hours.
3. One patient, whose colon was washed out daily with six pints of boracic acid lotion for seven days, developed signs of poisoning. She complained of severe frontal headache, vomiting, a slow pulse of about 58, and an eruption over the trunk and limbs. The rash consisted of small discrete papules of a light pink tint. On discontinuing the boracic lotion and washing out the colon with sterilized water the symptoms abated, and disappeared in twenty-four hours.

REFERENCES.

[1] BRITISH MEDICAL JOURNAL, vol. ii, 1894, p. 1155. [2] *New York Med. Rec.*, August 9th, 1902. [3] *Operations of Surgery.* [4] *Arch. für Verdauungsk.*, vol. ii. [5] *De l'Enteroptose*, 1889. [6] Cong. Internat. de Méd., Paris, 1900. [7] *Thèse de Paris*, 1895. [8] *Rivista Clinica*, 1888, No. 4. [9] "Colica Mucosa," 1903. [10] *Encyc. Pract. Med.*, 1904. [11] *Wien. klin. Rundschau*, 1901, No. 41. [12] *Trans. Path. Soc.*, vol. xlvii, p. 52. [13] *Zeitschr. für klin. Med.*, vol. xxiii. [14] *Amer. Journ. Med. Sci.*, April, 1888. [15] *Lancet*, June 15th, 1907. [16] Hunterian Oration, 1905. [17] *Lancet*, March 12th, 1904. [18] *Annals of Surgery*, April, 1906. [19] *New York Med. Rec.*, August 9th, 1902. [20] *Lancet*, vol. i, 1906, p. 1833. [21] BRITISH MEDICAL JOURNAL, vol. i, 1906. [22] *Annals of Surgery*, vol. xxxvii, p. 613. [23] BRITISH MEDICAL JOURNAL, May 13th, 1905. [24] *Lancet*, vol. i, 1906, p. 419. [25] BRITISH MEDICAL JOURNAL, March 18th, 1905. [26] Ibid., vol. i, 1906. [27] *Lancet*, vol. i, 1906, p. 1180. [28] BRITISH MEDICAL JOURNAL, vol. ii, 1905. [29] Ibid., vol. ii, 1903, p. 1430. [30] Ibid., vol. ii, 1907, p. 1340. [31] *Lancet*, vol. ii, 1907. [32] *Arch. für klin. Chir.*, vol. lxxiv, No. 1. [33] BRITISH MEDICAL JOURNAL, vol. i, 1908, p. 126. [34] Ibid., vol. ii, 1905. [35] Ibid., vol. ii, 1905, p. 863. [36] Ibid., vol. ii, 1894, p. 1155. [37] *Lancet*, vol. i, 1906, p. 1023. [38] *Operations of Surgery.* [39] BRITISH MEDICAL JOURNAL, vol. ii, 1905, p. 863. [40] Ibid., vol. i, 1905, p. 795. [41] *Operations of Surgery*, Jacobson and Rowlands.

LEUCOCYTOSIS IN APPENDICITIS.

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WHILE acting as house-surgeon in Mr. Riddell's wards in the Aberdeen Royal Infirmary I had the opportunity of examining the blood of a large number of patients suffering from appendicitis. The results of my early observations seemed so valuable that I continued the examinations during the whole year of office.

The behaviour of the leucocytes in most cases gives a sure index both of the intensity of the morbid irritant and of the individual's powers of resistance. Regarded in this light, and considered along with other clinical data, it is of great practical value in many cases. If taken by itself as a pathognomonic sign it would frequently be found to be as misleading as any other individual symptom.

The great drawback to such a method of clinical investigation in urgent cases is the fact that an apparatus and time are necessary; hence it is not so applicable to cases outside hospital practice. Reliable results can, however, be got after a short experience, provided a reasonable amount of care is exercised. On several occasions I have seen the blood of a patient examined by several different men, and the results in most cases were found to be practically similar.

This statement does not apply so accurately to the absolute count as to the differential count. Variations in the result of the absolute count are much more frequently encountered, but I am quite prepared to believe that probably such discrepancies are due to faulty technique.

ABSOLUTE COUNT.

Accurate information is got from studying both the absolute and the differential counts. In practically all cases of appendicitis and of acute abdominal or pelvic inflammation going on to pus formation or necrosis there is an increase in the number of leucocytes; and, speaking generally, it may be laid down that the greater the increase the more severe the nature of the lesion and the graver the prognosis. The great exception to this is to be found in severe cases of very sudden onset, especially in an individual whose powers of resistance are very slight. The reaction of the leucocytes depends mostly on the severity of the morbid condition and on the resisting powers of the individual.

In gangrenous and suppurative appendicitis, and in other acute suppurative abdominal conditions, the absolute

count is generally over 20,000, but cases in urgent need of operation with an absolute count of considerably under 20,000 are so numerous that one feels rather sceptical of the old rule to regard cases with a leucocyte count above 20,000 as indicative of pus formation or necrosis, and those under 20,000 as catarrhal.

It is of more service to know the rate at which the leucocytosis is increasing than to know the actual number of leucocytes per cubic millimetre in a given case. An increasing leucocytosis means that the individual is attempting to battle with the toxins eliminated from the morbid area, while if the leucocyte count rises above that indicating pus formation or gangrene, and keeps on rising rapidly, it shows that virulent poison is being freely circulated in the system, which may gain the upper hand at any moment if operation is not resorted to. Cases of acute appendicular abscess are quite common with a leucocytosis of 15,000 to 17,000. As a rule, one meets with a higher leucocytosis in gangrenous appendicitis than in abscess formation.

Most cases of gangrenous appendicitis ending in recovery have as a rule a high absolute count, many of them from 30,000 to 40,000, but, on the other hand, the leucocyte count may be as low as 15,000.

I think it is generally accepted that cases in which the general symptoms are severe and the absolute count low frequently die. I can recall two cases of perforated gangrenous appendicitis with diffuse general peritonitis, both of which had a leucocyte count of 12,000. The symptoms were extreme in both, and the patients died within twelve hours after operation.

In cases with very sudden onset, accompanied by a severe amount of shock, there may be little or no increase in the number of leucocytes; but if the individual reacts from the shock the leucocytes become increased and rise above normal, while if the reaction fails the leucocytes do not rise.

The variation in the leucocyte count is of great service in forming a correct opinion as to when operation should be performed in cases of appendicular abscess or pelvic abscess from other cause.

It would appear that if the leucocytosis is not increasing to any appreciable extent in cases in which there are clinical signs of abscess formation, it is safe to conclude that the abscess is becoming "walled off" by adhesions, and so operation can be safely postponed till the abscess has been thoroughly shut off from the general peritoneal cavity. The size of the leucocytes varies very much in different cases and in the same case at different times, but such variation is said to be of comparatively little significance. A low count means one of three conditions:

1. A mild case.
2. A very severe case.
3. An abscess thoroughly walled off (Cabot).

Differential Count.

While very valuable information can be obtained from the absolute count, that obtained from the differential count is even more reliable. The most important changes in the differential count are the great increase in the percentage of polynuclear cells and the diminution in the percentage of lymphocytes and eosinophiles.

Most authorities agree that the average percentage of polynuclear cells in the healthy subject varies from 65 to 72 per cent. (62 to 70 per cent., Cabot). In acute inflammation the percentage of polynuclear cells is always found to be increased.

In the cases of acute appendicitis going on to gangrene or pus formation that came under my observation the percentage of polynuclear cells varied from 79 to 90 per cent., and was generally higher in cases of gangrene than in those of abscess formation. It was also found to be higher in those presenting evidences of severe toxaemia. The highest count was 90.5 per cent. in a case of gangrenous appendicitis with general peritonitis, followed by death.

The ratio between the increase in the absolute number of leucocytes and the increased percentage of polynuclear cells in the greater number of my counts was about 1,000 to 1.5 per cent.—that is to say, taking the normal number of leucocytes to be 10,000 per c.mm. and the percentage of polynuclear cells as 72 per cent., then for every 1,000 of increase in the absolute count there was a corresponding increase of 1.5 per cent. in the polynuclear cells. All cases that ended in recovery after operation had shown a marked increase both in the total number of leucocytes and in the percentage of polynuclear cells (before operation), while the two cases suffering from perforated gangrenous appendicitis with general peritonitis, already referred to, had 88 per cent. and 90.5 per cent. of polynuclear cells respectively, with only 12,000 of an absolute count in both cases. I had the opportunity of examining the blood only in these two fatal cases, but the results of these point to the fact that in severe cases a low absolute count is frequently got, while the percentage of polynuclear cells is generally high.

Temperature and Leucocytosis.

The relation of temperature to leucocytosis does not seem to give reliable information, as cases are seen with grave clinical symptoms and high blood counts with little or no temperature; but, on the other hand, there are many cases showing an increase in the number of white cells accompanied by pyrexia, which, like the number of leucocytes, varies very rapidly, according to conditions existing at the site of the pathological lesion. An illustration of this is afforded by the following case of appendicular abscess with retention after operation. The blood was examined immediately before operation and daily after operation:

On admission:
- Absolute count ... ... 19,500.
- Differential:
  - Polynuclears ... ... 84.5 per cent.
  - Lymphocytes... ... ... 13.4 ,,
  - Eosinophiles ... ... 0.3 ,,
  - Mast cells ... ... —
  - Large hyaline ... ... 1.5 ,,

Temperature 102.6°.

First day after operation:
- Absolute count 19,000
- Polynuclears ... ... 78 per cent.
- Lymphocytes... ... ... 20.5 ,,
- Eosinophiles ... ... 0.5 ,,
- Mast cells ... ... —
- Large hyaline ... ... 1 ,,

Temperature, 100.4°.
Free discharge of pus.

Second day after operation:
- Absolute count 17,000
- Polynuclears ... ... 62.3 per cent.
- Lymphocytes... ... ... 36.3 ,,
- Eosinophiles ... ... 0.3 ,,
- Mast cells ... ... —
- Large hyaline ... ... 1 ,,

Temperature, 99.8°.
Free discharge of pus.

Third day after operation:
- Absolute count 20,000
- Differential:
  - Polynuclears ... ... 76 per cent.
  - Lymphocytes... ... ... 22.5 ,,
  - Eosinophiles ... ... —
  - Mast cells ... ... —
  - Large hyaline ... ... 1 ,,

Temperature, 102.5°
Discharge of pus much less.

Fourth day after operation:
- Absolute count 16,000
- Differential:
  - Polynuclears ... ... 82 per cent.
  - Lymphocytes... ... ... 16.5 ,,
  - Eosinophiles ... ... 0.5 ,,
  - Mast cells ... ... —
  - Large hyaline ... ... 1 ,,

Temperature, 103°.
Discharge almost ceased.

Fifth day after operation.
- Absolute count 16,200
- Differential:
  - Polynuclears ... ... 77.3 per cent.
  - Lymphocytes... ... ... 20.3 ,,
  - Eosinophiles ... ... 1.0 ,,
  - Mast cells ... ... —
  - Large hyaline ... ... 1 ,,

Temperature 99°.

A few hours after the taking of the previous count a large quantity of pus was evacuated from the wound.

Sixth day after operation.
- Absolute count 10,800
- Differential:
  - Polynuclears ... ... 75.5 per cent.
  - Lymphocytes... ... ... 21 ,,
  - Eosinophiles ... ... 0.5 ,,
  - Mast cells ... ... —
  - Large hyaline ... ... 2.5 ,,

Temperature 98.6°.
Free discharge of pus, and no subsequent retention.

INCREASE OF LYMPHOCYTOSIS DURING RECOVERY.

While making examinations of the blood of patients who had been operated upon for appendicular abscess it was observed in many cases that, very soon after the percentage of polynuclear cells and lymphocytes had returned to normal, the percentage of lymphocytes became increased. In most cases the increase was absolute, while in others it was only relative.

The following count is that of a case of appendicular abscess sixteen days after operation, where the discharge of pus had almost ceased:

Absolute count	10,000	
Differential:		
Polynuclears	57.7	per cent.
Lymphocytes	36.5	,,
Eosinophiles	2.0	,,
Mast cells	0.5	,,
Large hyaline	2.5	,,

Most of the cases that showed lymphocytosis continued to do so up till the time of discharge from hospital, so that I could not ascertain how long the condition persisted. The greater number of those cases appeared to be in fairly good health; but perhaps the condition of the blood may be explained by the low condition of the patients after a severe attack of appendicitis.

SYPHILITIC LEUCODERMA AND THE PIGMENTARY SYPHILIDE.

BY SIR JONATHAN HUTCHINSON, F.R.S.,
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"DAPPLED" is the term by which to describe the state of the skin in syphilitic leucoderma. A glance at the appended illustration will show what is meant by it. Dappling may be studied on the coat of a grey horse or a fallow deer, and with especial interest on that of the giraffe. It consists of the location of isolated patches of a tint different from the ground on which they are placed. The patches may be small or so large as to cover almost the whole of the ground, and thus make it difficult to recognize that they ever were merely patches. In the giraffe of South Africa the skin is a brown bay, but almost angular areas are mapped out by lines of yellowish-white, whilst in the giraffe of Northern Africa the lines of light colour have widened out until only islands of brown remain. Yet the two animals are probably not distinct species. In the dappled horse the arrangement of colour is reversed, it is the patches (or spaces) which are pale and the interspaces (or ground) which are of darker tint. I have felt it necessary to state these facts in order to make comprehensible my own theory of syphilitic leucoderma. In the domesticated horse it is only certain individuals which show a marked tendency to dapple in any conspicuous degree. We must suppose, however, that the potential endowment exists in all. Many, perhaps all, dappled horses become whiter—that is, less dappled—as age advances. The young of many animals show in extreme youth a speckling, spotting or streaking of their skins which they lose when adolescent.

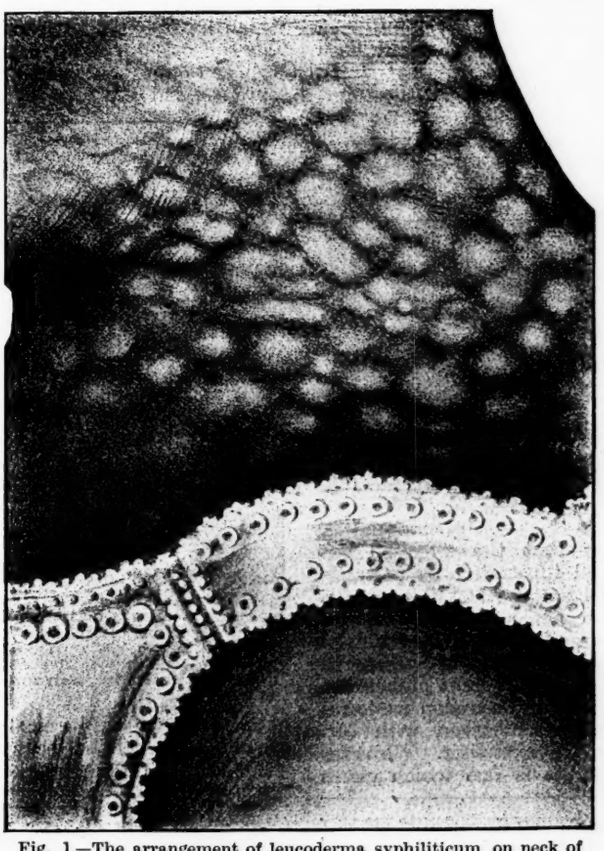


Fig. 1.—The arrangement of leucoderma syphiliticum on neck of a girl. Copied by permission from Chotzen's *Atlas*.

My theory as to syphilitic leucoderma is that the human skin is in many persons latently dappled, and that the condition becomes obvious under certain states of disturbed pigment function of some of which the spirillum of syphilis may be the cause.

The two letters which appeared in the JOURNAL of November 28th, 1908, p. 1650, warn me to be more careful as to making negative suggestions. The fear of the criticism of men better read and enjoying better memories than myself is now before my eyes. It must suffice, therefore, to say that if any portrait or detailed description of leucoderma syphiliticum in a negro or in one of the dark races has been published, I should be very thankful to be referred to the work in which it occurs. Such records, if they exist (and probably they do), would be most helpful to us in the endeavour to interpret the phenomena of this interesting condition.

In my last letter* I left the description of our own museum portraits unfinished. I will now, with your permission, attempt to complete it. Before doing so, however, it may be well that I should say a few apologetic words in reference to the letters from Dr. Pernet and Mr. Ernest Lane, which have appeared in the JOURNAL of November 28th, 1908, p. 1650.

These gentlemen point out, and with, I regret to say, some truth, that I have much understated the case as regards the amount of attention which has been given to this subject by English authors. I was wishful to show that the condition is one which is probably far more frequent on the Continent than it is with us, and had no wish to disparage or neglect our own literature. I admit that the expressions I used were too strongly put, and they can at first sight be explained away only by pleading either ignorance or forgetfulness. I hope my friends will allow me to plead guilty to their accusation under the head which they may deem the most pardonable. My words have, however, been taken to imply much more than they were intended to. They were dictated when I was standing on the Museum floor with a display of six portraits of leucoderma syphiliticum before me from Continental sources, and not a single one from an English source; and although I was aware that most of our systematic works, whether on syphilis or dermatology, had mentioned it, I had forgotten that any of their authors had recorded original facts, and thought that most had derived their information from foreign sources. I felt sure that, although the condition is one which invites alike the camera and the artist's brush, no English portrait of it had appeared. Whilst my letter was in the printer's hands my memory was fortunately reinforced in reference to the portrait given in the new *System of Syphilis*, and by the indulgence of the Editor I was allowed to squeeze in at the last moment a line of postscript in order to show that I knew of it. Now, of this portrait I had been previously quite cognizant, and had pointed it out with much commendation to some friends, but I had not then been able to display it with the others in my collection (it has since been added), and at the time I wrote it had absolutely escaped my recollection. It was, in fact, brought back to my recognition by one of my friends, to whom I had myself shown it a fortnigh

* BRITISH MEDICAL JOURNAL, November 21st, 1908, p. 1592.

previously. Even when I added the postscript I did not know of the existence of any letterpress description of it. I have since found out and read the able and interesting article contributed by Mr. Arthur Shillitoe to this most important work* on this very subject.

So far as my references to modern works during the past week have extended, I should have been inclined almost to repeat my statement of belief that the condition is one which is rare in English practice, and has been but little studied either by dermatologists or writers on syphilis were it not for Mr. Shillitoe's article. Mr. Shillitoe has enjoyed in the department of the Lock Hospital devoted to women very exceptional opportunities for observation. The result is that he declares that a condition which most of us had supposed to be decidedly rare is really quite common. He actually found it in 75 per cent. of a series of syphilitic patients observed consecutively. The explanation is that in addition to having a splendid field to work over he made most painstaking search, using optical aid, and thus no doubt identified it where most of us would have failed to see it.

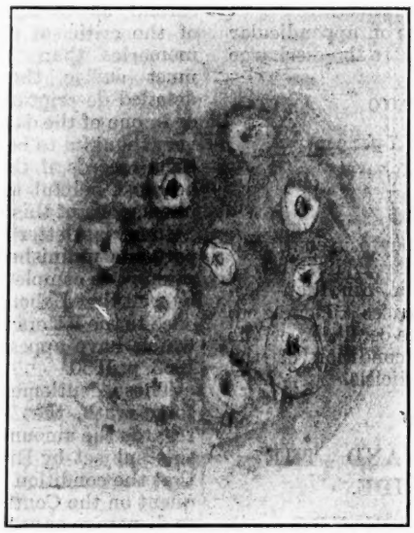


Fig. 2.—From the back of the neck of Neumann's portrait.

As I have said, were it not for this article I do not think that I should incline to make any apology to my friends your two correspondents. I find exceedingly little evidence that any of the brief statements in systematic works were written from personal observation. In more than one instance there are misstatements which prove that they were not. What I wrote as to the disease not having been observed or described did not mean that it had been omitted from textbooks, but that no original work had been recorded. Mr. Shillitoe's account, however, relieves our home literature from this charge, and seems to prove that the condition, if well looked for, is as common here as on the Continent and in America.† There remains, however, a fact which I cannot but still think implies something—that the affection has been widely discussed and well illustrated by portraits elsewhere, but has not until within the last few months claimed any detailed attention here; or been thought to be worthy of pictorial representation. If it could be made probable that there is great difference in the degree of prevalence in different races and different climes the fact might serve some purpose in our discussion as to its probable causes. For the present, however, with Mr. Shillitoe's statements before us, we must wait. We must note that this form of leucoderma is one which varies very much as to its degree of development, and that in a large majority of cases it may be very inconspicuous. As regards my own experience, although I have recognized a few ill-marked cases, I have certainly never seen conditions approaching in conspicuous peculiarity those shown in several Continental portraits. Had such come under my notice I should certainly have preserved a photograph or a water-colour portrait, and I have none. Some of my dermatological *confrères* may have done so and will now bring them to light, but as yet I have not heard of any.

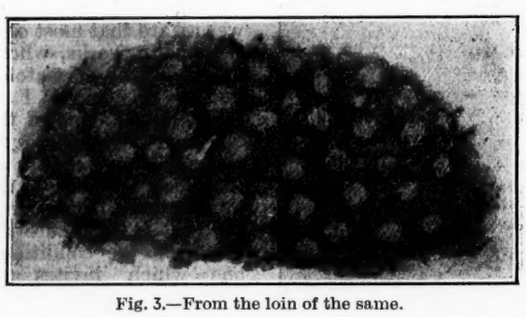


Fig. 3.—From the loin of the same.

I regret having been obliged to occupy so large a portion of your space in explanations of a somewhat personal character. The necessity has been laid upon me by the publication of your correspondents' somewhat impetuous letters. I had already promised to explain "next week," as regards Mr. Shillitoe, my wholly accidental omission; and had this been waited for, the necessity for anything further might probably have been anticipated. I will now gladly pass to the more congenial task of dealing with the subject itself. There are, perhaps, few topics which better exemplify the advantages of such a collection as that which we have now made at the Polyclinic Museum, and I would earnestly beg any who may be interested in leucoderma syphiliticum to do me the honour of an inspection of the collection. It will supply a good substratum of recorded and easily appreciated facts and will obviate important misconceptions which have found expression in some of our textbooks. The collection is by no means complete as regards all that has been published, but no pains will be spared to make it more so, and the loan of any drawings which may be entrusted to us will be most gladly welcomed. The following is a list of what we can offer for present inspection:

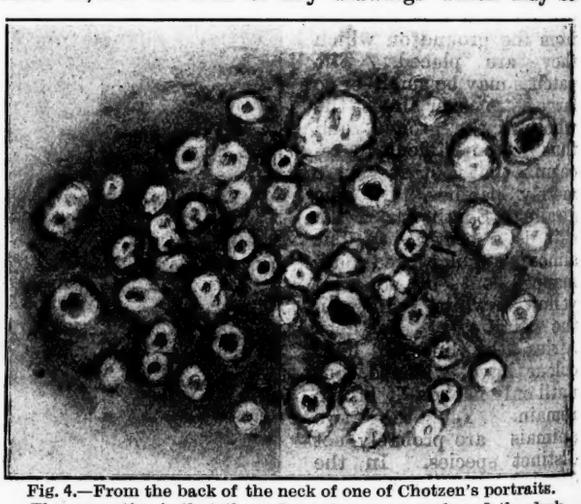


Fig. 4.—From the back of the neck of one of Chotzen's portraits.

The suggestion is that the pale spots are normal, and the dark ground and the central "nuclei" abnormally pigmented. It is essential that the reader should recognize that there are no "spots" in any other sense than changes of tint. The conditions here shown have been purposely somewhat exaggerated, with the object of clearness.

1. A coloured lithograph published by Fournier in 1881. It represents the neck and part of face of a young woman.‡

* It gives me the greatest pleasure to bear my testimony to the very high value of the articles contained in this work. It is invaluable to the student of syphilis. I have learnt much from it and hope to learn more. If, however, there be a place of purgatory for bad index makers, I fear that whoever compiled its index will have a long stay. The words "pigmentary syphilis" are indexed, but under them the reader is referred only to an unimportant half-page on the general topic, and no mention is made of an excellent four-page original article by Mr. Arthur Shillitoe, several of which pages bear that heading in large type.

† It may be suspected that, although Mr. Shillitoe has given us a beautiful portrait of syphilitic leucoderma, he is in these statements dealing chiefly with cases which were mainly pigmentary. All his patients were, he informs me, women.

‡ In reply to the question whether "pigmentary syphilis" or "syphilitic leucoderma" is the preferable term, it may be replied that both are needed. In a large proportion of cases of syphilis there is in the secondary stage some disturbance of pigment, and those in which the changes become conspicuous range themselves in two groups: those in which pigmentation alone is evident, and those in which leucodermic patches are present. No doubt the two are closely connected, and it is assumed, but by no means proved, that the one may precede the other. Clinical convenience, however, requires that we should recognize each by its appropriate name. The omission to do so has led to considerable apparent contradiction in the statements of authors. Those who consider the condition common are dealing with the pigmentary form only, and those who say that it is very rare with the leucodermic. The shield has two sides.

Unfortunately the colours have undergone some change, and it is not so clear as could be wished. Author's diagnosis: Syphilide pigmentaire.

2. A chromo-lithograph from Chotzen's *Atlas*. The neck of a young woman exhibiting in the most definite manner large areas of dull white arranged dapple-wise on a brown skin.

3. From Chotzen's *Atlas* we have one designated "Lues: Leucoderma colli." It shows the back of the neck and shoulders of a dark-haired young woman dappled over with white patches which cover almost the entire surface. The pigmented network is not very dark and by no means conspicuous.

4. In one of Neumann's two portraits the front of the neck and upper part of the bust are shown, and the condition of dappling is very definite. "Leucoderma syphiliticum."

5. Copied from the St. Louis Hospital collection and published in the *Atlas* edited by Dr. Pringle, we have shown the side of the neck of a young woman of a dark, swarthy skin. The skin of the neck is darker than that of the shoulder, and is dappled over with white ill-margined patches about the size of fourpenny-bits. In several instances these have become confluent. The ground network is very dark.

6. Mr. Shillitoe's portrait represents the side of the neck of a young woman with brown or auburn hair. It is dappled with white patches, which cover the greater part of the surface.

7.—Tafel 157 of Kaposi's *Atlas* represents the back of the neck of a woman with brown hair. Numerous small spots are scattered over the neck, not larger than split peas, and all of them consisting of a white ring, which in some instances encloses a dark centre like the nucleus within a cell. The enclosed nucleus is about the same tint as the ground colour. The patches are in some places confluent, and they cover the greater part of the surface. The diagnosis is "Leucoderma syphiliticum. Pigment syphilis." It can scarcely be considered to be either pigmented or leucodermic, but only congested. It resembles the following:

8. Number 210 in the supplement to Jacobi's *Atlas* has the diagnosis "syphilis maculosa confluens; leucoderma syphilitica." It represents the front of the bust, shoulder, and neck of a young woman, which is dappled all over with a pink eruption, which encloses lighter coloured spots. On the front of the neck these spots are white. It is tolerably clear that a diffuse erythematous condition has brought out the dappled pattern of the skin. Only on the neck is there evidence of pigmentation.

9. Tafel 158 from the same *Atlas* and with the same nominal diagnosis represents the front of the trunk from the nipples to the upper part of the thigh, marbled or dappled all over by a pigmented network. The contrast in colour is not very great. The neck and shoulders are not shown. A man.

10. A second portrait of Neumann's represents the back of the neck and almost the entire trunk. The groundwork of the entire skin is very dark, swarthy rather than black, and it is spotted over with darker patches the arrangement of which it is difficult to interpret. On the back of the neck, however, there occur definite areas of white skin enclosing darker spots, as in Kaposi's portrait mentioned above. Across the loins the condition of mapped-out dappling is definite, and the paler spots have dark centres. The contrast in colour is nowhere very marked.

11. The portrait published by Dr. Taylor of New York. The side of a man's neck is shown. The patches are very dark, and Taylor distinctly recognizes three forms.

12. A portrait given by Dr. Maclaren's valuable *Atlas of Venereal Diseases* (Plate 12). This was published in 1887, but I have only recently found it.

It will be seen that these portraits present us with some interesting problems. They are not all alike. Two of them show the dappled condition occurring over the whole trunk, and in one of them, perhaps both, the patient was a male. Two of them showed a condition which has possibly hitherto escaped notice in England—I desire to speak with the utmost caution—the presence of a dark nucleus in the centre of the white patch.

Now, if we observe the arrangements of colour on the skins of animals to which I have already adverted, we have at least three distinct types as regards the relation of patches to ground.

In the leopard black patches occur on a yellow ground, and many of the patches have yellow centres.* In a few of the latter black nuclei occur, which are thus surrounded by yellow, which again is margined with black. This is exactly what occurs, but in reverse order, in the portraits of leucoderma syphiliticum given by Neumann and Kaposi respectively.

In the giraffe dark patches are mapped out on a yellow ground. The ground in one variety is so scanty as to be little more than lines, but in another it may increase so as to comprise the greater part of surface and to reduce the patches to comparatively small areas.

Thirdly, we have the pattern shown on a deer or dappled horse, in which light-coloured patches, mostly round and of very various dimensions, occur on a darker ground. This is the condition usually realized in syphilitic leucoderma. It may be further noted that on some regions (see loins and neck of Neumann's portrait) the pigmented areas are squared rather than round, in exact imitation of what occurs in the giraffe, and in some of the regions of skins of leopards and other animals.†

Fournier, who devotes one of his admirable clinical lectures‡ to "*Syphilide Pigmentaire ou Ephélique*," is emphatic in declaring that this condition stands apart from other syphilitic conditions, and should be studied by itself: "Accident très bizarre, très curieux, qui s'éloigne à tous égards des autres déterminations cutanées de la vérole." He does not admit that the white "taches" are in any degree decolorized, but regards them as normal skin. He had seen but one case in a male. He thought the condition incurable by specifics and that it never lasted less than one or two years and often longer.

He distinguished it from Addison's disease by stating that in the latter the pigmentation is general and uniform, "non-tachetée." If, however, we deny, with him, that the white patches are other than of normal tint, then this condition is "non-tachetée" also, for it is the pigmentation of the ground which is excessive, and this is not tachetée. Thus we reject altogether such terms as "macular lesion" as inapplicable, and come to the conclusion that the condition is one of diffuse melanoderma *plus* the peculiarity of a normally pale skin in patches. This brings us very near to the suggestion of a functional temporary and minimized type of Addison's disease, due, possibly, to derangement of the suprarenal capsules. Fournier denies, and I cannot but think with good reason, that it can be regarded as in any way secondary to preceding syphilitic eruptions.

We may, I think, safely assume that the peculiar patterns evolved in cases of this affection are physiological, and due to original organization and not to disease. Building on this assumption, I would further suggest that in secondary syphilis, disordered function of the suprarenal and other organs favours the accumulation of melanin in the cells, and that, finally, exposure to light brings about its deposition in unprotected parts. Thus we explain the preference of the malady for the female sex, and for the neck and bust, and its tendency to persist.

We may conjecture that the affection is far more common in non-syphilitic subjects than has yet been suspected. If some observer, as zealous and keen-sighted as Mr. Shillitoe, would conduct a series of control observations on healthy individuals—brunettes by preference, but not excluding those of the male sex—we should probably obtain some very interesting facts. In the meantime I would invite those interested in the matter to pay an observation-visit to the Zoo, and afterwards to devote half an hour to our Chenies Street Museum.

* The jaguar is the leopard on whose skin these conditions are best observed. See page 394 of Lydekker's *Royal Natural History*, or, still better, the specimen in the South Kensington Museum.

† No one will, I hope, suppose I am suggesting any sort of "reversion" towards the peculiarities of any particular animal. My meaning is simply that the potential endowments of the human integument are the same as those of animals, and may favour the production of various resemblances which are based upon its structure. The growth of the nails, the arrangement of the surviving hair, etc., are familiar illustrations of what is intended.

‡ It is worth noting that these lectures are on syphilis as observed chiefly in females.

A CASE OF VINCENT'S ANGINA.

By J. T. C. NASH, M.D., D.P.H.,
COUNTY MEDICAL OFFICER OF HEALTH FOR NORFOLK.

THE following case appears to suggest that the organisms associated with the name of Vincent might after all be merely ordinary oral parasites which happen to find a suitable nidus for multiplication in certain throat conditions, especially where there is a tendency to the formation of a false membrane through the action of streptococci or pneumococci, or even the *Bacillus diphtheriae;* but it is only just to state that a previous case of Vincent's angina had occurred in the same house in an adult female in the preceding August. In this case, also, Vincent's organisms and streptococci were found bacterioscopically.

Mlle. P., aged 20, complained of severe headache on October 16th, 1906. On the 18th she noticed a pricking pain in the throat on the right side, accompanied by some dysphagia. Appetite good, and no constitutional signs of any moment beyond headache, which persisted for some days.

Clinical Signs.

On examination the tongue was normal, and there were no enlarged glands; a white membranous patch was visible between the pillars of the right fauces, and there was slight nasal discharge.

Bacteriological Examination.

A swab taken from the white patch of deposit was first rubbed on blood serum for incubation at 37° C., and then on a clean slide for immediate examination. After standing with Loeffler's methylene blue, the immediate examination revealed numerous fusiform bacilli and spirilla, the organisms described by Professor Vincent. These failed to grow on the inoculated serum, which after twenty-four hours' incubation at 37° C. revealed the presence of streptococci.

Treatment.

The treatment adopted was that which is recommended for *angine de Vincent*—namely, tincture of iodine locally, and potassium chlorate internally.

Result.

The organisms of Vincent disappeared rapidly, the streptococci more slowly, but recovery took place in a week.

The data in this and other cases mentioned are too meagre to permit any reliable conclusion to be drawn, but in each of my cases it seemed probable that street dust inhaled accounted for the sore throat and streptococci, and that Vincent's organisms were merely accidental, but in view of Vincent's own experience and descriptions further study of similar cases is required.

I am strongly of opinion that if more throat swabs were subjected to immediate examination than at present obtains, and Vincent's organisms looked for, it would be found that these organisms are not so rare as is thought.

The question of their pathogenicity also requires further investigation, and appears to be worth the attention of the clinical pathologist.

The point to be decided is this: Is Vincent's angina a sufficiently distinct disorder to deserve a specific designation? The symbiosis of spirilla and fusiform bacilli point in this direction, as also the fact that the particular spirilla are difficult of cultivation. They really seem to be more of the nature of spirochaetes.

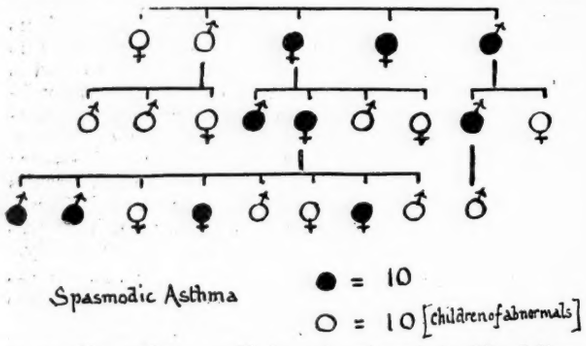
The above notes were written nearly two years ago. There appeared in the issue, November, 1908, of the *Journal of the Royal Institute of Public Health* a contribution by Dr. M. A. Arnold on Vincent's organisms which corroborates the views I have expressed. Dr. Arnold's contribution is well worth attention. The clinical appearance of the membrane seen on the fauces in the cases, in which I have examined for and found Vincent's organisms, is very suggestive of diphtheritic membrane. I am afraid my own opportunities of further study of these organisms are now likely to be few, but I venture to hope others will follow the matter up.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

MENDELIAN HEREDITY IN ASTHMA.

As I think the enclosed chart, showing, in black, the members of a family who have been afflicted with



spasmodic asthma, will be of interest to Mendelians, I shall be glad if you will publish it.

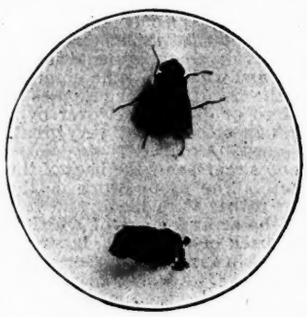
The numbers—10 normal and 10 abnormal descendants—are in accord with Mendel's theoretical 50 per cent. of each class in such cases, for there was almost certainly a heterozygous abnormal parent of those shown in the first line.

Wrexham. H. DRINKWATER.

DIPTEROUS LARVAE INFECTION.

IT must be an uncommon experience to have two cases of infection by dipterous larvae under one's care at the same time. The method of infection in the one case and the consequence of the infection in the other may warrant their being reported.

CASE I.—Mrs. B., aged 55, an asthmatic, while sitting sewing, felt a fly under her right nostril. She at once tried to expel it by blowing the nose, but without success. An attack of asthma coming on at once, she had recourse to the fumes of a powder which she habitually used at such times. The fly, not quite dead, fell out, but could not be found. This was on a Wednesday afternoon. Severe attacks of sneezing troubled her the same night, and the next morning there was a bloody nasal discharge. The nose began to swell, and the discharge became more bloody and the sneezing more annoying. By Friday she could not leave her bed; by Saturday night the bleeding was sharp and the swelling had spread to the cheeks and eyelids. Such was her condition on my seeing her on Sunday morning. In addition there was a foul, sanious discharge, the lining membrane was much swollen and cracked, the pain and distress severe. The septum nasi showed an old-standing perforation centrally. The nose was washed out with a saturated solution of boric acid and an antiseptic inhalation given. By next day the patient's distress was so serious that Dr. Marry was asked to see her with me. The nose was douched several times a day with potassium permanganate, which kept down the fetid smell, but gave no other relief. By Wednesday morning the discharge of maggots began and kept up for about ten days. A perforation occurred through the right nostril just below the nasal bone. As the right ala became very much swollen and blocked the passage it was incised, and a small nest of maggots was revealed. They spread into the right cheek up to the lower eyelid; they burrowed into the gums and appeared in the mouth. In spite of douches of hydrogen peroxide, mercury perchloride, and permanganate, they kept on appearing up to the number of about a dozen and a half each day. Between 100 and 150 maggots must have been passed in all. They left the nasal cavity disorganized, and bone exposed in many directions. I secured one of the maggots, which were evidently too large for those of the house fly, and put it in a bottle. It hatched out a blue-bottle. The accompanying photograph shows the fly and its case.



CASE II.—While attending the last case I saw an elderly lady who had an epithelial tumour the size of a small hen's egg growing in front of the left ear. It had begun to bleed. On examining its base, which was about 1½ in. by ¾ in., I saw a few maggots. Evidently the bleeding was due to their destruction of the tissue where the vessels entered. In spite of strong applications for their destruction the maggots, which proved far more numerous than I thought, succeeded in riddling the tumour in twenty-four hours, causing pretty severe loss of blood. By next day the tumour was fetid, the bleeding continuous, and the face as far as the eye oedematous. Dr. Marry saw the case with me, and we decided to remove the growth with the cautery. The whole centre was a mass of maggots. When the tumour was removed down to the level of the skin a large nest of maggots was found in the cheek, and had to be destroyed with the cautery. They had evidently developed from ova of the housefly, being much smaller than those of the previous case. Promptly the bleeding stopped and the swelling disappeared, leaving only the scar resulting from the use of the cautery.—I am, etc.,

Trinidad, B.W.I. STEPHEN M. LAURENCE, M.B., C.M.

OEDEMA OF THE EYELIDS WITH PYREXIA.

MY attention has been drawn to an article in your issue of December 12th, 1908, by Dr. Spriggs, under the title of

"An Epidemic of Influenza Characterized by Oedema of the Eyelids."

As several pyrexial cases in which this phenomenon of oedema of the eyelids was a prominent symptom occurred in this town during the latter half of last year, I am prompted to offer the following remarks. In all some 9 or 10 cases of this description have been brought to my notice, 3 of these occurring in my own practice and 5 in that of my neighbour, Dr. W. F. Lloyd, of Windsor. While the symptoms presented by these cases showed great similarity one to another, they were hardly such as to suggest an influenzal origin to either of us—though, considering the protean character of this malady at the present time and the diversity of opinion as to its real nature, it is of course impossible to assert that our cases could not have owed their origin to this cause.

The cases seen by us approximated more to a gastro-intestinal type—some disorder of the bowels, either diarrhoea or constipation with flatulent distension, being present in every instance. In 3 cases in which the fever was unusually prolonged a suspicion of enteric fever was aroused, but when the blood was tested for Widal's reaction the result was negative. The oedema of the lids was in every instance early and transient, disappearing mostly within forty-eight hours. It was, however, a very prominent symptom, sufficient always to attract the attention of the patient and his friends. In no case were the eyelids reddened, nor were the conjunctivae observed to be injected. The pyrexia was mostly greater than in the cases related by Dr. Spriggs. In two of my cases it reached 103° and in the other 102° F. In no case was the patient suddenly prostrated by the attack as so often occurs in influenza. All my cases were walking about in a febrile condition when first observed, and had to be sent to bed. Albuminuria was not present in any case. The duration of the fever varied; the shortest period of illness observed was ten days and the longest three weeks. No heart or lung symptoms were noticed, and the fauces were invariably healthy; in fact, in no case was any cause discovered sufficient to give rise to the pyrexia. Notwithstanding this these patients were decidedly ill, apparently more so than the cases already related in your columns, for in one or two instances, notably one case of Dr. Lloyd's which lasted three weeks, the condition was such as to give rise to a certain amount of anxiety.

We have thought it well to place a brief record of these cases before your readers, not with the idea of contrasting them with the cases related by Dr. Spriggs, but in the hope that others who may have met with this somewhat unusual symptom in conjunction with a pyrexial condition may be induced to relate their experiences, and so possibly be the means of enabling us to classify similar cases that may confront us in the future.

Windsor. CHAS. R. ELGOOD.

INAUGURAL SYMPTOMS (GASTRIC ULCER).

I READ Mr. Moynihan's address with very great interest, but I scarcely anticipated that I should have such an early opportunity of putting his advice to practical use or of verifying his statements as to the inaugural symptoms of ruptured gastric ulcer. His address was published on November 28th, and on the following day, about 5.20 p.m., I received a very urgent summons to see a young woman who lives only a few doors from my house. I returned with the messenger, and the history given me was that about seven or eight minutes previous to my arrival, as she was lying on the couch, she was seized with a sudden overwhelming pain in the region of the stomach, and felt sick and faint. She is said to have lost herself once or twice owing to the intensity of the pain, and to have become very pale.

I found her in a reclining posture on a couch, her expression extremely anxious, eyes turned up, lips bloodless, and with beads of perspiration on the brow. The skin of the face, chest, and abdomen was very pale. Her arms and hands (which were exposed, as she was wearing a short-sleeved blouse) were warm, as also were her legs and feet. She made one or two attempts to vomit, but only brought up a teaspoonful or two of glairy-looking fluid. Her pulse on my arrival was 86, regular and about normal in strength and volume, but after the attempts at vomiting it became 96, and remained so until I left her. Her respiration was 34, short, shallow, and moaning on expiration. The temperature in the axilla was 98.6°. There was great tenderness over the region of the stomach about 2 in. below and to the inner side of the left costal margin The abdominal muscles were very rigid, but it was noted that those of the left side were much more so than those on the right. There was no distension of the abdomen. The patient was a young woman aged 23 years, and I had treated her two years ago for an attack of haematemesis.

From the above symptoms I diagnosed that she had a ruptured gastric ulcer, and I recommended her immediate removal to the Leeds General Infirmary. This was done, and Mr. Moynihan operated as soon as she arrived, finding a perforation of an ulcer on the lesser curvature of the stomach, near the cardiac orifice.

I think this case may be of interest, coming immediately after the publication of Mr. Moynihan's address, and verifying in such a striking manner his description of the inaugural symptoms of this condition, as opposed to the usual textbook descriptions. I am doubtful also whether any case has been observed so early, and on that account may be thought worthy of record.

Leeds. JOHN EXLEY, M.R.C.S.Eng., L.R.C.P.I.

IONIZATION IN CHRONIC ENDOMETRITIS.

DR. HERMAN'S instructive paper on the "Use and Abuse of the Curette," in the JOURNAL of December 5th, 1908, encourages me to advocate a method suggested by Dr. Samuel Sloan, of Glasgow, and others for the treatment of chronic endometritis by means of ionization. The details of the technique are of the simplest character, and can be carried out by any physician.

The vagina having been previously douched with an antiseptic solution, a sterilized copper sound, varying in calibre according to need and having an insulated stem connected with the positive pole of the continuous current of an electric battery, is introduced into the cavity of the uterus. A large pad of absorbent cotton or of several layers of lint 6 in. by 6 in., soaked in a saline solution, is laid on the hypogastrium and connected with the negative pole. The circuit is then closed and the current gradually increased until a record of 20 to 40 milliampères is reached, and this maximum is maintained for about fifteen minutes; afterwards the current is gradually reduced to zero, then the commutator is changed and 5 milliampères of a reverse current is allowed to pass for three to four minutes in order to loosen the copper sound, which otherwise will be found to be tightly grasped by the neck of the uterus. The current is now again reduced to zero and the sound gently withdrawn. By this means the internal surface of the uterus is thoroughly cauterized. As there is abundant discharge for a day or two after the operation, vaginal douching is recommended.

The advantages of this method are that the endometrium, while thoroughly dealt with, is not wounded, any abraded surface is encouraged to heal, there is no danger of sepsis or of septic absorption, the discomfort to the patient is but slight, no anaesthetic is required and the patient does not need to retire to bed after the operation.

In order to observe how the copper is carried into the tissue of the uterus, let the physician take a piece of raw beef and plunge a thick copper wire connected with the positive pole into one side, while a platinum electrode in connexion with the negative pole is introduced into another part of the beef at a distance of 5 to 6 inches. In a few minutes after the current has been turned on, the positive copper electrode will be found tightly fixed in the beef, while the negative platinum electrode will be only loosely held, and a streak of the green oxychloride of copper will be noticed starting from the copper electrode and diffusing gradually through the mass of beef towards the negative pole.

I have employed this method with gratifying results in several cases of endometritis accompanied by chronic discharge between the menstrual periods, and also in cases of menorrhagia, both with or without pain. The discharge is lessened or made to disappear and the amount of menorrhagia is reduced. I am convinced that this plan of treatment deserves an extended trial, and all the more that it offers in many instances an effective substitute for the process of curettage.

Glasgow. W. F. SOMERVILLE, M.D.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.

CASE OF SUPPURATING DERMOID OF MEDIASTINUM.

(Reported by Thos. B. Mouat, M.B., Ch.B., House-Surgeon.)

A boy, aged 17, was admitted under the care of Dr. Bottomley on October 7th, 1908, with the following history:

History and Clinical Course.

He had had good health up to November, 1907; he was then laid up with chilblains and blisters of the toes, which persisted for some weeks. Cough commenced in January, and swelling of the abdomen, followed by oedema of the legs, was noticed in April, 1908.

On admission he was suffering from general oedema and ascites; both increased rapidly in spite of medical treatment and repeated tapping, and the patient died on November 25th. The physical signs were: Dullness on percussion behind and for about an inch on either side of the manubrium sterni continuous below with an enlarged cardiac dullness. Over this area the breath sounds were tubular without accompaniments, and vocal resonance increased. There were no cardiac murmurs. The urine was of about normal amount, and contained no albumen till a few days before death. The evening temperature was usually between 100° and 101°. The diagnosis of tuberculous glands in the mediastinum obstructing the superior and inferior venae cavae was made.

Necropsy.

On opening the thorax, the pericardial sac appeared to be very much enlarged, but this on incision proved to be a large cyst, distended with purulent fluid, which contained yellow fatty masses and long hairs. The cyst was adherent to the diaphragm below; above, a narrow neck ran up in front of the superior vena cava, and communicated with a large loculus which lay anterior to the arch of the aorta and its branches; its wall was lined with scaly, fat-covered integument, and the cavity was at one point constricted by a broad fleshy band. The heart lay embedded in the thick posterior wall; no sign of any pericardial sac could be found, and the cyst appeared either to have grown from the pericardium, or in its growth to have become very completely adherent to it. The chambers of the heart, especially the auricles, were flattened, but otherwise healthy. The pleural sacs were obliterated by extensive adhesions between the layers, and the lungs, liver, and other viscera were congested, but except for this showed no disease.

Streptococci were grown on culture from the cyst fluid.

In an investigation of the solubility of lime in water, an account of which was presented to the Chemical Society recently, Messrs. G. T. Moody and L. T. Leyson have endeavoured to avoid the errors which largely vitiated the results obtained by earlier workers, and some of the results obtained in the course of the research are of more general interest. Lime prepared from chalk consistently showed an apparently greater solubility than pure lime from calcite, and this was found to be due to the presence of impurity, chiefly silica, which is not revealed by the ordinary test of judging the strength of lime water from its alkalinity. As is well known, the solubility of lime is less at higher than at lower temperatures; but the authors of the paper found that when the temperature of saturated lime water was raised it remained supersaturated, and only gave up the excess with extreme slowness; on the other hand, solutions of lime were appreciably weakened by passing through filter paper or other fibrous substances. The official lime water is intended to be a saturated solution of lime at ordinary temperatures; the deficiencies in strength which are occasionally found in the article supplied in shops are usually due to careless preparation or to exposure to the air, but it appears that other considerations must not be entirely ignored.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

PATHOLOGICAL AND CLINICAL SECTION.

Birmingham, Friday, November 27th, 1908.

Professor Leith in the Chair.

Rhinitis Caseosa.—Professor Leith and Dr. C. J. Lewis gave an exhibit of bacterial cultures obtained from a case of rhinitis caseosa. The clinical history of the case, communicated by Dr. Glegg, was as follows: The patient, a woman of about 40 years of age, was sent to Dr. Glegg by an ophthalmic surgeon, who suspected an intranasal cause for the lacrymal obstruction from which she was suffering on the right side. Two years ago she had influenza, and since then the right side of the nose had become stopped up. She also had several carious teeth removed from the upper jaw on the right side. There had been a good deal of frontal pain on that side. The right side of the nose was filled with a mass of putty-like material, with an intensely fetid odour. This was removed under an anaesthetic, and the right maxillary antrum opened by removing a portion of its anterior wall. The mucosa was hypertrophied and polypoid. The small polypi were removed with cutting forceps, but the mucosa was not curetted. A large opening was found in the outer antral wall. This opening was enlarged below, and the cavity packed with gauze from the nasal cavity into the antrum. The gauze was removed next day, and alkaline lotion used thereafter. The discharge has entirely ceased, and the nasal cavity is clear. Now, three months since the operation, there was no recurrence of the former symptoms. On examining the material removed by Dr. Glegg, Professor Leith and Dr. Lewis found several organisms, which they deemed to be non-pathogenic, and also a streptothrix, which they consider to be probably pathogenic. The characters of the suspected streptothrix are:

1. Microscopically—is a typical streptothrix, Gram-positive, and not acid fast.
2. Cultures. (1) Agar—Colourless growth invading medium, becomes covered on surface with white chalky bloom, gradually assuming a pinkish tint.
   (2) Stab-jelly—slowly liquefied formation of a bubble.
   (3) Broth—forms pellicle, and forms flocculent deposit at bottom.
   (4) Milk—forms pinkish film adherent to tube.
   (5) Serum—similar to that on agar.
   (6) Potato—A colourless growth which speedily forms the chalky bloom. This bloom is much more chalky than that of *Streptothrix nigra*.
3. Pathogenicity—doubtful. Tested thrice since isolation.
   First animal (guinea-pig) died in three days, and a different germ obtained from its tissues.
   Second animal (guinea-pig) died in three days, and no germ recovered from its tissues.
   Third animal (rabbit), inoculated on November 23rd, 1908, is still alive and well.

Tubal Pregnancy.—Mr. J. Furneaux Jordan reported four cases: (1) Aged 29. Seven children, youngest aged 3. Losing for nine weeks before operation on September 25th, 1908. It began as an ordinary menstrual period, and was free from any accompanying pain until the last few days. There was acute tenderness and a distinct swelling in the left half of Douglas's pouch. The tube was dilated, and protruding through the dilated fimbriated extremity was an organized blood clot. A quantity of dark blood and blood clot occupied the pelvis. Sections taken across the tube showed that only a limited portion of the wall of the tube had been stretched by and formed a covering to the tubal mole. At first sight it appeared that the mole was intramural, but a careful examination revealed a thin, flattened-out layer of tubal mucous membrane lining the entire covering. It is possible that this epithelial lining was pushed in front of the pregnancy as it made its way into the tube wall. Several chorionic villi were found in the clot (2) Aged 31. Married eighteen months; one child,

9 months old. Seven months ago was infected with gonorrhoea, from which she said she had quite recovered. The menstrual period, due on September 2nd, did not come on until September 9th, and from then until October 16th, when first seen, the loss had been continuous. Very little pain, except on September 9th, the day of onset, when it was severe in the lower part of the abdomen. There was a large tender swelling filling up the left half of Douglas's pouch. On October 25th the specimen shown was removed. It consists of the left appendages, and the outer end of the tube is dilated and occluded by adhesions to the ovary. Its contents were thick blood, fluid, not clotted. In the left ovary was a cyst the size of a small apple. In the middle of the tube, proximal to the dilated portion and distant ¾ in. from it, was a small swelling. Microscopically this proved to contain a small, firm clot with chorionic villi in it. It occupied the lumen of the tube, the wall of which showed no sign of thinning in any portion. (3) Aged 41. Married seventeen years; five children, youngest aged 6. One miscarriage two years ago, ever since which she has had pain in the left side. For two months has had continuous uterine haemorrhage, varying in quantity. It began as an ordinary period. The pain has been very severe in the lower left part of the abdomen. A small swelling could be detected in the place of the left tube. At the operation on October 5th an unruptured left tubal pregnancy was removed. The site was the middle third of the tube, and in its thickest part the swelling was nearly ½ in. in diameter. Microscopic slides show a small organized blood clot occupying the lumen of the tube, surrounded everywhere by the folds of the tubal mucous membrane. In the clot are chorionic villi. There is no sign of any invasion of the tube wall by the pregnancy. (4) Aged 28. Married one year. In January, 1905, went two weeks over her time, then lost for a week, stopped for three days, lost again for a fortnight, at the end of which time she was seen with Dr. Sturge. Pain was not marked. Douglas's pouch was completely occupied by a firm, tender swelling, which was diagnosed as a peritubal haematocele. At the operation, on February 20th, the swelling proved to be a right ovarian cyst, about the size of an orange. In the very middle of the tube of the same side was a very small swelling, which Mr. Furneaux Jordan cut open. There was immediately extruded a small clot. Microscopically it proved to be a tubal pregnancy. Slides and photographs of slides were shown, in which the relations of the parts were clearly seen. A chorionic villus with Langhans's cells and syncytial cells, and also, adjacent to the tubal mucous membrane and in the muscular wall of the tube, a number of decidual cells. The microscopic slides of Cases I, II, and III were very kindly cut by Dr. Mackie, pathologist to the Birmingham Hospital for Women. Those of Case IV were cut by Professor Leith, of the Pathological Department of the University. To Professor Leith the author expressed his indebtedness for his interest in the case, and for the beautiful and excellent photographs he took for him.

Perforation of Small Intestine.—Dr. MACKEY showed organs from a case of ulceration and perforation of the small intestine associated with chronic interstitial nephritis. The patient, a woman of 27, had been admitted into Queen's Hospital on account of profuse haemorrhage from the bowel; she had neither pain, tenderness, nor rigidity, and the haemorrhage soon became very slight. There was no diarrhoea; the temperature remained normal. On the eighth day after admission she suddenly developed all the signs of general peritonitis, and died. At the autopsy the lower half of the small intestine was infiltrated with blood; the mucous membrane was the seat of numerous—over a hundred—small ulcers, three of which had perforated and caused a general peritonitis. The mesenteric vessels appeared normal; the heart showed marked hypertrophy and the kidneys well-marked interstitial nephritis. Dr. Mackey thought that there had been a severe haemorrhage into the wall of the bowel, and that the ulceration of the damaged mucous membrane was secondary.

Malformation of Internal Female Genitals.—Mr. H. P. COLE showed a specimen which consisted of a mass representing the entire internal genitalia removed by operation from an unmarried woman, aged 22. The operator was Mr. Jordan Lloyd, who kindly gave permission to demonstrate the case, and provided the clinical history. The mass removed lay on the pelvic floor, slightly to the left of the middle line, between bladder in front and rectum behind. There were no broad ligaments, no round ligaments, and no ovaries. The mass was rounded in outline, shaped somewhat like a uterus, and measured 4½ cm. long by 2½ cm. broad. No lumen was present. The cut surface showed the presence of numerous small whitish encapsuled areas, enclosed by a definite cortex. On either side were two folds connected to the central mass, above and below, but separate from it between these points. In the free edge of this fold was a distinct unbroken tube with muscular walls and a lining layer of large cubical cells. Further investigation was needed definitely to determine the nature and origin of these structures, but it was suggested that the central mass might represent the uterus filled with an adenomatous growth of the developing mucous membrane, or that the mass was really an instance of the inclusion of one organ, or a part of one, within another; in other words, an embryonic "rest." The tube in the lateral fold was regarded as a remnant of the Wolffian duct, or possibly of the Müllerian duct.

Lymphatic Leukaemia.—Dr. DOUGLAS STANLEY showed the spleen and stomach from a case of lymphatic leukaemia. The patient was a woman aged 81, and was shown as a living case at the March meeting, 1908. The cause of death was exhaustion, due to a gastro-colic fistula.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Friday, December 11th, 1908.

E. HASTINGS TWEEDY, M.D., President, in the Chair.

Intermenstrual Pain.

DR. R. D. PUREFOY, in a paper on intermenstrual pain, said that one of the least common and least understood varieties of pain connected with and dependent on menstruation was that to which Priestley in 1872 applied the term "intermenstrual." Medical literature furnished but scanty records of such cases, and details as to treatment and its results had been seldom supplied. It often proved rebellious to treatment, and showed marked liability to recurrence. It was generally met with between the ages of 25 and 35, and was commonest in sterile women or those who had not been recently pregnant. Some writers had described the pain as paroxysmal and sudden in occurrence and severe in degree; and many attributed it to the condition known as hydrosalpinx. The speaker was unable to agree with those statements as to the nature of the pain and its causation. In the most typical cases there was but little discoverable disease of the uterus and appendages, and in only a few cases was it associated with such watery discharge as might be attributed to leakage from a hydrosalpinx. Treatment should be constitutional to improve the general health, and local if disease of the uterus or appendages could be detected. A second paper on the same subject was read on behalf of Dr. SPENCER SHEILL. In the discussion which followed, Dr. WILSON said he thought that where there were local lesions which could be corrected, with the result that the pain ceased, the case hardly came under the head of intermenstrual pain; neither did cases in which congestion of the ovaries was relieved by the loss of blood at the period. The difficulty of treating cases of pain that came on a definite number of days after a menstrual period, and ceased a definite number of days before a period, was very great, and although the drugs mentioned by Dr. Sheill might give relief, it was a matter of considerable doubt as to what the condition really was. Dr. ASHE thought the condition was probably due to some form of toxaemia arising from an excess of internal secretion of the ovary. Dr. NEILL said that salicylate of menthol had recently been advised for relief of pain. Dr. FITZGIBBON said that in speaking of intermenstrual pain there was a tendency to mix up a variety of different diseases. They should keep in mind that the pain should be one which occurred at a fixed time between the periods, and in which there

was no definite organic disease. The ignorance which existed as to ovulation made it difficult to say certainly that it was congestion of the ovary that caused the pain, but he expected that Dr. Sheill's suggestion of circulatory treatment would improve the condition. Dr. KATHERINE MAGUIRE said she did not find the condition common in an excessive degree. She found aspirin rather a dangerous drug, as far as its gastric symptoms were concerned, though it certainly relieved pain. She found phenacetin to do good. If ammonol or antikamnia were given, they should be given after food and with tea or coffee, which neutralized their effects. She regarded both drugs as dangerous, because they were compounds of antifebrin. The PRESIDENT said that women suffered from constipation and congestion of the pelvic organs, and he believed that this congestion would be relieved by free purging better than by the drugs mentioned. He thought that in most cases not due to constipation or neurasthenia they would find some disease of the tubes which might give no evidence of their condition to the examining finger. Dr. PUREFOY, in reply, said he agreed with Dr. FitzGibbon's limitation of cases, but such typical cases were rare. He was very sparing in his prescription of drugs, and considered that anything like repeated use of the coal-tar remedies was greatly to be deprecated.

LIVERPOOL MEDICAL INSTITUTION.—At a meeting on December 17th, 1908, Mr. R. KELLY read a note on the *Treatment of general peritonitis* by the Murphy method. After giving an account of the axioms laid down by Murphy in this condition, namely, early and speedy operation, removal of offending appendix, or closure of bowel wound, the Fowler position and proctolysis, he demonstrated an apparatus to effect the continuous rectal irrigation, and illustrated his remarks by five cases. Mr. W. THELWALL THOMAS had been much impressed a few years ago by Murphy's demonstration of the advantages of the Fowler position and continuous rectal perfusion, and resorted to it in all cases of septic peritonitis with marked success. Mr. LITTLER JONES read a note on a case of *Aneurysm of the femoral vein.* The history was that, after violent exertion in lifting a sail, the man experienced sudden great pain in the groin, which was found to contain a swelling. It was irreducible, and evidently contained fluid, and was thought to be a hernial sac containing fluid. Operation revealed a sacculated aneurysm of the femoral vein, and any attempt to empty it caused constriction of the neck of the sac. The vein was ligated above and below, and the aneurysm dissected out. It was seen to be of recent origin. The man soon recovered, and without any oedema after ligation of so important a vein. In another case the aneurysm was fusiform, and operation was again followed by recovery. These two cases led one to believe that violent exertion might cause rupture of one or more coats of a vein, apart from any predisposition to varicosity, and in that way these conditions might be brought forward as accidents under the Compensation Acts. Dr. A. AINSLIE HUDSON read a paper on *Mechanical and manual massage*, and compared the physiological effects of the two processes. He related his experience with mechanical massage in eye diseases, chronic deafness, chronic abdominal affections, gout, rheumatism and allied conditions, venous congestions, exudations, nervous affections, and gynaecological conditions, and gave a demonstration of its technique.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—At a meeting in December Mr. H. W. W. GRAY read a paper on Bier's method of producing *Local anaesthesia* as applied to a case of amputation at the wrist. It consisted in putting a Martin's bandage round the upper arm, selecting a vein near the bend of the elbow, isolating it, opening it and injecting into it 30 to 40 c.cm. of $\frac{1}{4}$ to $\frac{1}{2}$ per cent. novocain solution. In a few moments anaesthesia was completed and the amputation was carried out; all that the patient complained of, apart from the discomfort of the tourniquet, was a slight burning sensation at the wrist, and she made an attempt to withdraw the arm while the operation proceeded. If thought necessary a considerable amount of the anaesthetic could be expressed by massage from the open vein after the operation. He commended the method on account of its simplicity and its efficacy and its advantage to isolated practitioners. In another paper Mr. Gray dealt with *The treatment of burns* by the thorough antiseptic cleansing of the affected area and surrounding parts under anaesthesia if necessary, and thereafter dusting over these areas very freely a powder composed of equal parts of pure boric acid and pure carbonate of bismuth (the subnitrate of bismuth should not be used as it causes intense smarting pain). This powder formed with the early exudate a "seal" which protected the affected area from fresh infection; no gauze, cotton-wool, or bandages should be applied. Any discharge which later might trickle from underneath the seal was wiped away and fresh powder dusted on. He also dealt fully with the treatment of cases sent to hospital after sloughing had started in the affected areas. If sloughs were very adherent, boric acid fomentations, antiseptic baths, peroxide of hydrogen, etc., were used to loosen them and lessen septic absorption. When the slough was loosened, an anaesthetic was given, and the area treated as above. If the parts were not sufficiently disinfected the scab which first formed might swell rather badly; in this case it should be removed in a few days, and fresh boric and bismuth dusted on. He had not required to remove a seal on account of decomposition on a second occasion. The parts affected should be kept at rest, but joints should be moved once every morning and every evening to prevent ankylosis. The method did away with the pain of frequent dressings, and resulted in a pliable scar, vascular in constitution, and with no tendency to contract. Dr. MACKENZIE BOOTH, in a paper on anaesthesia in *Intranasal manipulation*, gave his experience of various local anaesthetics with and without the addition of adrenalin. He thought eudrenine and codrenine were best for general use, and gave in detail the various methods of application, and their use in the examination of the nasal cavity. He then described what he considered the limitations of local anaesthesia in nasal surgery, and compared it as a whole with general anaesthesia.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 17th, 1908, Mr. P. E. BARBER, President, in the chair, Mr. SIMEON SNELL showed a little boy from whom he had removed a retrobulbar tumour by Kronlein's operation. The result was very satisfactory, the eye was retained, and the proptosis was gradually diminishing. He also read notes on a case of *Acute bromism* after three 5-grain doses of bromide. There was a bullous eruption on the ears, a tingling sensation in the hands, and coryza. All the symptoms cleared up when the bromide was withheld. Mr. GARRICK WILSON read notes on a case of supposed rheumatic peritonitis. A boy who had suffered from rheumatic fever had acute abdominal symptoms, and was submitted to operation, when there was found a great deal of clear serous fluid. No primary focus could be found. The boy recovered, but convalescence was interrupted by symptoms of acute rheumatism, which were alleviated by salicylates. Dr. ARTHUR HALL showed 2 cases in which remarkable improvement of *Splenic leukaemia* followed the use of the x rays. In both cases the patient had been able to work for several months. No bad symptoms had resulted. The red corpuscles had increased with the decrease in the whites. He also showed a case of myoclonus in a man following influenza. The spasms were limited to the left deltoid, trapezius and coraco-brachialis. At times they were very painful. They could be brought on by raising the arm above the horizontal. Dr. F. H. WADDY, in a paper on *Decimal dispensing*, uttered a strong protest against the action of the Board of Trade in establishing a standard metre, kilogram, and litre, differing slightly from the original standards, and differing in such a manner that the British litre, instead of measuring 1,000 British c.cm., actually measured 1,000.16 c.cm. This defect stultified for calculation purposes that fundamental principle of decimal proportion which was the most valuable characteristic of the real metric system. He deplored the fact that the General Medical Council had introduced these new legalized standards into the *British Pharmacopoeia* of 1898, in place of the original standards which had hitherto been adopted. He also mentioned the suggestion of Professor Parker that our existing national systems of weights and measures admit of convenient correlation of a physical basis in virtue of the circumstance that a cubic inch of water at 122° F. (= 50° C.) weighed exactly 250 grains.

In conclusion, the author urged that it was not reasonable to attempt to establish artificial relations between systems of weight and measure in defiance of those relationships which experience or custom demanded. The dozen was far superior for subdivisional purposes to the ten, and the best solution of all difficulties would be to learn to count in dozens instead of in tens.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At a meeting on December 9th, 1908, Dr. MILLIGAN (President) in the chair, Mr. C. ROBERTS and Dr. C. POWELL WHITE showed two specimens of congenital tumour of the kidney removed by operation, and some similar tumours from the Pathological Museum of the University of Manchester. All the tumours contained cells resembling sarcoma cells, epithelial tubes, muscle fibres, etc. They were distinguished from sarcomata by the presence of the epithelial tubes, which were formed by differentiation from the sarcoma-like cells, and hence these and similar growths had been placed by Dr. Powell White in a class by themselves under the name of blastocytomata. Sir WILLIAM SINCLAIR gave a short address on peritonitic adhesions, drawing his illustrations almost entirely from obstetrics and gynaecology. He maintained that if the peritoneum was wounded or became inflamed, as, for example, in the slighter attacks of lymphatic infection in childbed, adhesions were inevitable; exceptions must be extremely rare, and could depend only upon the movements of the intestines when the omentum did not come within range. He traced the formation of adhesions from the fibrinous exudation stage to the stage of firm, non-vascular fibrous adhesions which displace organs or interfere with their functions. In gynaecology, when adhesions of the uterus could be diagnosed or reasonably suspected, manipulative treatment was futile. Operation was indicated, and details depended upon what was then made out by touch and sight. Inasmuch as adhesions were inevitable, their production in certain operations should be aimed at; they should be made useful and conservative; their formation should not be left to blind chance so that they may become a cause of discomfort or danger. Professor DELÉPINE, in a paper on methods of examination of milk, showed that milkborne infections were either direct zoogenous infections (for example, tuberculosis), indirect anthropogenous (for example, typhoid), or belonged to a mixed class in which the infection was brought about by indirect faecal pollutions (for example, summer diarrhoea). In zoogenous infections the pathological state of this fluid might be indicated more or less clearly by alterations in composition, by an excess in the amount of cells, or by the presence of specific pathogenic bacteria. In anthropogenous infections there was usually evidence of contamination with extraneous products and of the presence of specific pathogenic bacteria. These, as well as cells and other products derived from the udder, could be separated by centrifugalization, and obtained in a thick viscid mass generally known as "*slime*." Physico-chemical analysis and simple microscopical examination, estimation of the number of "leucocytes" and estimation of the number of bacteria yielded results which had no constant relation to the infectiousness of the milk, and could not be relied upon as bases for preventive administrative action; while determination of the presence of specific pathogenic bacteria by various methods, and of the pathogenic action of milk by inoculation, though very useful in special cases, were too slow for administrative purposes. Measurement of the slime was the only method capable of being used in current administrative work, but it could not be relied upon to exclude all infectious milk from the market. By this method it would, however, be possible to eliminate from the milk supply a very considerable portion of the unsound milk.

CLINICAL SOCIETY OF MANCHESTER.—At a meeting on December 15th, 1908, the PRESIDENT, Dr. J. J. COX, delivered an address, entitled A Due Conservatism in Medical Therapeutics. In the course of it he deprecated the indiscriminate use of the curette, both in the case of post-nasal adenoids and for uterine conditions. He referred to the impossibility of keeping pace with the numerous products of the chemist, and maintained that a wise policy held fast to that which had been proven. Stress was laid upon the value of such therapeutic measures as massage, hydrotherapy, and phlebotomy, which did not always receive the attention they deserved at the hands of the profession. A practical point upon which he felt strongly was the great advisability in infantile ailments of ensuring sufficient sleep, and to this end Dover's powder provided a well-tried and useful means.

CHELSEA CLINICAL SOCIETY.—At a clinical meeting on December 15th, 1908, Dr. A. F. PENNY, President, in the chair, the following were among the cases shown:—Mr. J. HOWELL EVANS: Case of *Tumour of the lower jaw* on the right side about the size of a duck's egg. It commenced two years ago after an alleged injury. It appeared to be lobulated, but there was no positive evidence of cancer. The *x* rays showed that the jaw was affected only on the outer side, but were negative as regards diagnosis. Dr. ALFRED EDDOWES: A case of *Lupus erythematosus*, affecting the scalp, ears, backs of hands and fingers, forearms, points of elbows, and hard palate. The scars on the face were pitted, and all the lesions on the limbs were of a "folliclis" character. The exhibitor believed "folliclis" to be merely a nodular form of lupus erythematosus, or ulerythema, and considered that this case confirmed his opinion. Dr. GREY: Three cases of rodent ulcer, 2 healed by the *x* rays and 1 by the *x* rays and Finsen rays combined. Dr. GUNNING: A case of congested fold of mucous membrane between the first lower bicuspid of each side and the upper lip, in a boy aged 13; also 3 cases to demonstrate the practicability of developing the "fusion centre" of children affected with strabismus, by means of an ordinary stereoscope and "Kroll's pictures." Mr. ASLETT BALDWIN: (1) An unusual case of *Spina bifida* in a boy aged 6. There was no tumour, but a depressed area over the sixth and seventh dorsal vertebrae, the laminae being present. There was incontinence of urine, weakness of sphincter ani and of the legs, and a tendency to fall down. (2) A case of carcinoma high up in the rectum successfully treated by a double operation, abdominal incision and subsequent removal of the tumour after forcing it through the anus.

Reviews.

KEEN'S "SURGERY."

THE third volume of KEEN'S *Surgery*[1] tempts a reviewer to employ exaggerated terms of commendation. The editor deserves congratulation on his selection of authors, and the series of admirable articles which compose this volume forms a high testimonial to his judgement.

Dr. Cushing writes first on the surgery of the head, and the chapter is worthy of one who has made many valuable contributions to this subject. He is at his best in his descriptions of cranial injuries and their effects on the brain, a subject by no means always lucidly treated in textbooks. Newer procedures such as the relief of compression in basal fractures and the treatment of injuries of the head in the newborn receive adequate consideration. Operative methods are very fully described and illustrated. The illustrations are also a great feature of the second chapter, by Dr. E. W. Andrews, on the surgery of the neck. Dr. Albert Kocher writes on diseases of the thyroid gland. With the experience of these affections afforded by the surgical clinic of Berne, it is little wonder that the article is a complete monograph of much value. More particularly of interest is the discussion of the group of affections included under the heading "thyrotoxicosis," and of their relations to fully-developed Graves's disease. Professor Theodore Kocher's results in 200 cases of Graves's disease are quoted, a mortality of 4.5 per cent. and 85 per cent. of cures.

The article on the nose and its accessory sinuses is by Dr. Harmon Smith. It is chiefly notable for its discussion of the modern methods of treating sinus suppuration. Dr. G. E. Brewer writes the two articles which follow, on the surgery of the larynx and trachea and the surgery of the thorax, and again methods of treatment form the chief feature of the text, and are abundantly illustrated.

In Dr. Finney's article on the breast there are some matters that call for remark. It may be questioned

[1] *Surgery: Its Principles and Practice.* By Various Authors. Edited by W. W. Keen. Vol. iii. Philadelphia and London: W. B. Saunders Co. 1908. (Roy. 8vo, pp. 1132. 572 illustrations. 30s.)

whether any good purpose is served by distinguishing a new type of "intracanalicular myxoma" from the fibro-adenomata, and as their "characteristic feature" is the projection into dilated epithelial-lined ducts and spaces of papillomatous growths, the relation of these tumours to the cysts with intracystic papillomatous growths, which are described later, requires definition. These matters are mentioned here to call attention to the confusion which still exists concerning the classification of various mammary affections. The necessity for revision is shown by the statement on p. 582 that 50 per cent. of cysts with intracystic papillomatous growths become carcinomatous, which may be paralleled with a statement in a well-known handbook of morbid anatomy that these growths are always benign! Mr. Edmund Owen writes the chapter on the surgery of the mouth, teeth, and jaws. He advocates the Brophy operation for cleft palate, operates on the cleft palate before the harelip, and considers that the most favourable time for the operation is between the ages of 2 weeks and 3 months. The surgery of the tongue is separately dealt with by Dr. Da Costa. For clearing out the glands of the neck he recommends the operation of Crile and others—that is to say, the excision of the whole gland mass in one piece from below upwards, including the internal jugular vein.

The remainder of the volume is devoted to abdominal surgery. The introductory articles are by Dr. J. C. Munro; then follow the surgery of the stomach by Mayo Robson, the surgery of the liver and bile ducts by W. J. and C. H. Mayo, and the surgery of the pancreas and spleen by B. G. A. Moynihan. The mention of these names is sufficient to show the quality of the articles, embodying as they do the views and practice of acknowledged authorities.

OPHTHALMOLOGY.

OWING to an accidental oversight we have not hitherto called attention to a very instructive book on *Preventable Blindness*[2] written by Mr. N. BISHOP HARMAN, whose large experience as Oculist (with care of blind children) to the London County Council schools particularly fits him to set forth his experience in book form. It amounts, of course, to a dissertation on ophthalmia neonatorum, which, although known to all practitioners, is not even yet recognized as being the cause of so much blindness as it really is. It is a disease which can practically always be prevented, and if taken in time can in nearly every case be cured, and yet more than one-third of the blindness among school children is still due to it. If it were included among those diseases which it is compulsory to notify, it is probable that its disastrous effects would almost entirely disappear. Short of that, all that can be done is to educate the public, and particularly all nurses, so that it shall be at once recognized and appropriate treatment adopted. In the book before us a very valuable historical summary of the disease is given. In a short chapter dealing with the causes of blindness it is shown that in the census returns for 1901 there were living between 1,000 and 2,000 persons whose blindness might have been prevented, while in a large series of cases the author found that 36.36 per cent. of the cases in the blind schools were there on account of the ravages of this disease. This total, large as it is, is really less than the true figure, for it does not include cases in which a little sight has been obtained from operations and other means which enables the sufferer to be classified among the partially blind; if these were included the total would exceed 40 per cent. The incidental and clinical character of the disease and the risk of permanent injury are discussed, and an important section is devoted to its contagiousness. This is a point on which the Local Government Board requires instructing, for in answer to a question by Lord Robert Cecil in the House of Commons, Mr. John Burns, the President of that Board, stated that "the danger scarcely existed." That, of course, is absurd, and Mr. Harman well cites as an example to the contrary an instance in which a mother and four children all became infected from one case. A good photomicrograph illustrates the chapter on bacteriology, and then follows one on treatment and another on prophylaxis.

[2] *Preventable Blindness.* By N. Bishop Harman, M.A., M.B., F.R.C.S. London: Baillière, Tindall and Cox. (1907.)

Textbooks on ophthalmic surgery still appear, though whether the supply exceeds the demand is, perhaps, better known to the authors and publishers than to any one else. A book on *Diseases of the Eye* has just been brought out in the series of Oxford Medical Publications, and the author is Mr. M. STEPHEN MAYOU.[3] The first chapter, devoted to a description of the methods of examination of the eye, is sketchy; it seems to assume that the reader knows all about the subject, and it is to be doubted whether the beginner could learn much from the meagre details given. In discussing Snellen's test types on page 56, we are told that the types "are graduated, so that the letters at the distance marked over each line subtend an angle of 5° on the retina (the distance between two cones)." If the cones were separated by the space represented by this angle, there would only be room for a dozen or so in the eyeball. As a matter of fact, there is no difficulty in distinguishing things which subtend an angle of one minute or even less, and the letter which Snellen indicates by $\frac{6}{6}$ subtends at 6 metres an angle of five minutes, with an angle of one minute subtended by each component part of the letter, and every one knows that most eyes are capable of seeing more than $\frac{6}{6}$. In Chapter III, dealing with diseases of the conjunctiva, the author reaches his own special subject, to the investigation of which he has given so much attention. The illustrations are infinitely better than in the preceding chapters, and this section is evidently written by one who has devoted himself to bacteriological investigation. Chapter IV deals with the cornea and sclerotic. A photograph shows the author's chair and headpiece for the localization of foreign bodies by means of the *x* rays. Perhaps few surgeons will agree with the statement that "it is little use attempting to extract foreign bodies in the eye after three days, unless they are loose in the vitreous or embedded in the lens, as they become surrounded by lymph." The fifth chapter deals with diseases of the iris, ciliary body, and choroid, and describes the ordinary conditions met with. Chapter VI, dealing with diseases of the lens, occupies only fourteen pages, which is certainly not a large space to devote to this structure. After that the retina, vitreous, and optic nerve are discussed in one chapter, followed by glaucoma, disorders of ocular muscles, diseases of the eyelids and orbit. The whole of the operations on the eye are condensed into forty-nine pages, and, finally, there is an appendix. The book is nothing like so large as it looks, owing to a wide margin, large type, and a large space between each line. We are not particularly impressed with the book. It cannot be considered to compete seriously with the many textbooks already in existence, and, if it aims at being a cram book, it is too large. No doubt the author was limited in the space at his disposal, for we know enough of his previous publications to feel sure that he is capable of producing a book which would be more generally useful.

The effect of a want of balance in the muscles of the eye looms large in the minds of some people as a cause of neurasthenia and many other ills of the nervous system. Every one will agree that until recent years the subject was much neglected; however much the eye muscles were out of gear, no attention was given to them unless the want of parallelism of the eyes was sufficient to cause an obvious squint. A reaction came, and certain authors, notably in America, went to the opposite extreme, and made out that pretty well every disease to which the human frame is heir owed its origin, directly or indirectly, to some defect of the ocular muscles. Thoughtful men set to work to find out where the truth lay, and as usual it was found to be somewhere between the two extremes. Volumes have been written on the subject, but one of the most complete works is that written by Dr. LUCIEN HOWE, of Buffalo. Volume I of *The Muscles of the Eye* was published more than a year ago, and consisted of a description of the anatomy and physiology of the eye muscles. Volume II, which has now appeared, deals with pathology and treatment, and consists of five parts split up into numerous chapters and divisions. It contains 374 pages of text, and

[3] Oxford Medical Publications. *Diseases of the Eye.* By M. Stephen Mayou, F.R.C.S. London: Henry Frowde; and Hodder and Stoughton. 1908. (Cr. 8vo, pp. 400, 119 illustrations, and 8 coloured plates. 5s.)

100 more of bibliography, index, and appendix.[4] The book contains good material, and the facts are well and carefully arranged. It represents an enormous amount of work, and includes within its pages reference to all the work which others have done on the subject. No one who is interested in this branch of ophthalmology could afford to be without a copy, and we heartily commend it to our readers.

THE RAT PROBLEM.

The Rat Problem, by W. R. BOELTER,[5] deals with a question which has lately come prominently to the front in the domain of preventive medicine. The desire of the author is to enlist public opinion in the crusade against rats and other vermin, and thus pave the way for the passing of a bill drafted on the lines of the Danish Rat Law by the Incorporated Society for the Destruction of Vermin.

The first chapter deals with the natural history of the brown rat (*Mus norvegicus*), tracing its introduction into Europe from Asia in the eighteenth century, destroying on its march the less savage black rat (*Mus rattus*), and rapidly, owing to its great fecundity, becoming a serious pest. It is suggested that there are in this country at least as many rats as there are human beings, and on the moderate estimate that each rat does one farthing's-worth of damage daily by the destruction of food and other material, the annual loss is calculated to be £15,000,000. This figure has been arrived at by means of certain rat feeding experiments, and by systematic inquiry among land owners, farmers, shopkeepers, shipping, dock and colliery companies, and others.

Only one short chapter is devoted to the part played by rats in the dissemination of disease, but as the book has been written more for the lay than for the medical reader, the notice this branch of the subject receives is sufficient for the purpose in view. The channels of communication between the rat and man, resulting in the propagation of trichinosis and plague, are shortly described, and as regards the latter disease, while it is stated that the rat is not the only agent of dissemination, it is claimed that to disregard that factor would defeat any scheme for the stamping out or even the partial reduction of the disease.

Considerable space is devoted to the means for exterminating rats, and "the ruthless destruction of some of their natural enemies, the owl, the weasel, and kestral," is deprecated. An interesting account is given of the numerous mechanical devices for exterminating rats, many of which are said to be very efficient in the hands of experts who are familiar with the habits of the animal. The use of chemical poisons for this purpose is not very strongly advocated; although seemingly a cheap method it is said that in practice it is found to be the most expensive, because it frequently entails the accidental loss of other life. An account is given of the more or less successful efforts of bacteriologists in this and other countries to find a reliable virus poisonous to rats and mice only. While it would seem that this quest has not yet been altogether successful, the author appears to favour Neumann's virus ("ratin"), partly because it is supplied in a form for convenient use by inexperienced persons. Favourable though the experimental trials with this virus appear to have been, the author doubts its power so far as transmitting the disease from rats which have been poisoned to healthy rats is concerned. Be this as it may, it is not surprising that when this or any other virus comes to be prepared on a commercial scale and sold by local tradesmen disappointing results should be obtained. Moreover, having regard to the possible risks attending the indiscriminate use of all such animal poisons, sooner or later it will become necessary to impose conditions upon their sale to the general public, especially in view of the recent unfortunate occurrence in the City of London recorded by Dr. Collingridge.

The book is attractively written, well illustrated, and is certainly calculated to serve its purpose.

[4] *The Muscles of the Eye.* By Lucien Howe, A.M., M.D., Professor of Ophthalmology in the University of Buffalo, etc. Vol. ii. Pathology and Treatment. Illustrated. New York and London: G. P. Putnam's Sons. The Knickerbocker Press. 1908. (Roy. 8vo, pp. 482. 16s.)

[5] *The Rat Problem.* By W. R. Boelter. London: John Bale, Sons and Danielsson, Ltd. 1909. (Fcap. 4to; 165 pages and 75 illustrations. 2s. 6d.)

ANATOMY.

IN compiling this textbook of the comparative anatomy and development of the fetal membranes and placenta, Professor GROSSER[6] has undertaken a piece of work that was well worth doing and has performed the task exceedingly well. The text is written in the pellucid style in which occasionally a German can write, and it is admirably matched and illuminated by the numerous illustrations, mostly photographic, and the diagrams. It is thus an attractive book to read, and the author has at the same time been so successful in the judicial tone of his summary that the critic has no need to deal with the matter of his judgements. The descriptions and argument develop so smoothly, and the author is so careful to indicate the questions that remain unsettled and to describe the reasons of those from whom he differs, that his reader is not likely either to misunderstand him or to be entrapped into any false position. About a quarter of the volume is devoted to the history of the fetal envelopes, and in this, after a clear account of the processes in the easily observed Sauropsidae, Professor Grosser discusses the forms of development of the amniotic cavity in mammals and the early stages of their embryology. The rest is devoted to the subject of placentation, and in this, after an adequate description of the semiplacentae and of placentae verae in animals, he discusses in detail all the recent work that has been done on the implantation of the human ovum and its early development. In the course of the discussion the origin of most of the placental anomalies is indicated, and there is a section on the biology of the placenta which, for completeness' sake, one might have wished extended on the chemical side. As it is, the results of the important chemical investigations on placental metabolism, which have been fairly numerous, are only indicated, but perhaps the author might plead that he is an anatomist. Otherwise, the book is a satisfactory one, and the printer and illustrator deserve praise as well as the author himself.

NOTES ON BOOKS.

ALTHOUGH intended only for pharmacists, there is a good deal in *The Chemist's Annual for 1909*,[7] edited by Mr. JOHN HUMPHREY, which should be found useful by medical men. Suggestions with regard to details of treatment might at times be gathered from the Supplement to the *British Pharmaceutical Codex*; while in the additions to the *Pharmaceutical Journal Formulary* registered during the last two years may be found a great number of recipes for the preparation of elegant mixtures, pastes, and pills, such as crowd a modern chemist's shop.

Dr. W. T. BEEBY and Mr. E. REYNOLDS-BALL have furnished a very readable and practical guide to *The Levantine Riviera*.[8] Every one who has travelled by railway between Genoa and Spezia must have been struck by the extreme beauty of the scenery of this narrow strip of coast between the mountains and the sea, as far as occasional glimpses between the innumerable tunnels allowed him to see it at all. This coast undoubtedly should and does attract many who require a sunnier and more southern winter climate than that of England, with less crowd, less fashion, and probably less expense than at most places of the Western Riviera. The little guide book seems to us, in its descriptions of Rapallo, etc., only to give the Eastern Riviera the praise which is really its due.

A more decorative exterior is the most obvious change in the edition of *Whitaker's Peerage, Baronetage, Knightage, and Companionage* for 1909.[9] There are many who may be disposed to quarrel with the terms used in the title of the work, but few will cavil at its contents. These, as in former years, set forth alphabetically the names of all persons, whether male or female, who are deemed to have a right to a handle of any sort to their names, or who have been admitted by the reigning monarch to any one of the numerous Orders. The very useful introductory matter

[6] *Vergleichende Anatomie und Entwicklungsgeschichte der Eihäute und der Placenta mit besonderer Berucksichtigung des Menschen.* Von Dr. Otto Grosser, A. O. Professor für Anatomie in Wien. Wien u. Leipzig: W. Braumüller. 1909. (Sup. roy. 8vo, pp. 326; 210 Abbildungen im Text u. 48 auf chromolithographirten Tafeln. M. 10.)

[7] *The Chemist's Annual for 1909.* London: The Pharmaceutical Press. (Imp. oct., pp. 994. Price 5s. net.)

[8] *The Levantine Riviera; A Practical Guide to all the Winter Resorts from Genoa to Pisa.* By W. T. Beeby, M.D., and E. Reynolds-Ball, F.R.G.S. London: Reynolds-Ball's Guides. 1908. (Fcap. 8vo, pp. 168, illustrations and a map. 2s. 6d.)

[9] *Whitaker's Peerage, Baronetage, Knightage, and Companionage.* London. 1909. (Post 8vo, pp. 800. Price 5s.)

includes this year a glossary of official terms, from which the significance of a number of phrases frequently employed but not always clearly understood may be immediately ascertained. Information is given, for instance, as to the functions of little-known bodies and officers, such as the Court of Claims and the Clerk of the Cheque. This reference work, in spite of the moderation of its size, is comprehensive and easy to use.

MEDICAL AND SURGICAL APPLIANCES.

A New X-Ray Generator.

At the Sheffield meeting of the British Medical Association, Dr. Lester Leonard of Philadelphia brought forward some results of instantaneous *x*-ray exposures obtained with the aid of a closed magnetic circuit transformer, capable of pushing a very large volume of secondary current through the tube. Subsequently, at the Amsterdam Congress of Radiologists, the inventor, Clyde Snook, also of Philadelphia, read a paper on this form of generator, and on that occasion Messrs. Newton and Co., of London, secured the right to manufacture these machines in this country. The Snook-Roentgen apparatus, for those who can afford to possess it, will greatly simplify *x*-ray procedure. No trouble can arise from induction coil or interrupters, and the output of the rays is absolutely controlled by the movement of a crank handle. It is the result of six years' careful study of the induction coil, the aim being—as with improvements of the induction coil itself—to suppress the inverse discharge as completely as possible and to increase the useful secondary current. The apparatus consists of two parts, one a dynamo or inverted rotary converter—serving the purpose of the interrupter in the ordinary installation in that it takes up continuous current from the main, and sends it out as alternating current—and the other an oil-immersed closed magnetic circuit transformer, deriving its primary low voltage current from the converter. But the essential point about the apparatus, which adds so greatly to its efficiency, is the arrangement by which the rectifying switch receiving the high tension secondary current from the transformer is maintained in synchronism by being mechanically attached to the axis of the dynamo or converter producing the primary alternating current. This mechanical rectifying arrangement, which makes it possible to utilize the full value of both phases of the current, overcomes a difficulty which radiologists have experienced for years. Practically the entire output of the closed circuit transformer is available, and there is no need to trouble about synchronism because, the rectification taking place on the shaft of the generator, any variation in pace will affect both movements equally and simultaneously. Thus, while the best induction coils only give, perhaps, 20 per cent. efficiency, the Snook apparatus gives more like 90 per cent. A demonstration upon the four-kilowatt machine which Messrs. Newton have introduced showed that it was easily possible to adjust the current delivered to the tube up to 40 or even 60 milliampères—indeed, to an extent beyond the power of any *x*-ray tube at present constructed to withstand. Nor was the easy adjustment limited to the higher outputs of electrical energy, for equal steadiness was obtained down to the fraction of a milliampère. The movement of a crank handle to produce the rapid delivery of any desired amount of unimpaired energy to the tube is surely the last word in simplicity. It may be added that this machine is probably the first electrical invention—at any rate, so far as medicine is concerned—to be manufactured in this country through the instrumentality of the new Patent Act. If it had not been for that piece of legislation the machines would undoubtedly have been imported from the United States. The apparatus is on view during January at Messrs. Newton's premises at Temple Bar, E.C., and those who are interested in *x*-ray work are invited to witness demonstrations, for which no special appointment need be made.

An Open-air Châlet.

Dr. R. Foster Owen (Streatham) writes: May I be allowed to reply to your kind criticism on the light question contained in the article on my open-air châlet, published on December 5th, 1908, p. 1686? There will be a flood of light from large top lights in all the four sections of the roof; and again, any who desire can have lights put in the eaves at any point or points they may wish, but they will not really be necessary; and the eaves serve a very important office in protecting the open-air panels and the gallery also from the wind and rain, while allowing the air to freely circulate all through the châlet. A single châlet for one can be built for as little as £45, and so up to 12 beds in one châlet at about £150.

MEDICAL INSPECTION AND AFTER.

MEDICAL TREATMENT OF SCHOOL CHILDREN IN LONDON.

In the Journal of December 26th, 1908, p. 1869, appeared the text of the reports presented to the London Education Committee by a special subcommittee appointed to inquire into the whole question of the medical treatment of children attending public elementary schools in London, but we were not then able to deal with certain appendices to the majority report, of which we will now give some account.

In the course of its inquiry the subcommittee found it desirable to ascertain how far existing medical institutions would be in a position to meet the increased demands for the medical treatment of elementary school children expected to arise as a consequence of the institution of medical inspection. The elucidation of this matter involved not only questions as to the numerical sufficiency of the provision that is or could be made, but also the situation of the institutions, hospitals (general and special), free dispensaries, and provident dispensaries, in relation to the distribution of the population from which children attending elementary schools are chiefly drawn.

The committee first, in November, 1907, addressed a circular letter to hospitals in the county of London, but the information thus obtained showed that a wider inquiry was necessary. In consequence, on February 7th, 1908, the following circular letter was addressed to the authorities of hospitals, dispensaries, and kindred institutions:

Sir,—The Education (Administrative Provisions) Act, 1907, gives the Council further powers, and imposes new duties in respect of the medical inspection of children, and the question therefore of how far existing institutions do or can meet the increased demands for the medical treatment of children, has become of immediate importance.

The Education Committee, with the authority of the Council, have accordingly appointed a Special Subcommittee consisting of members of the Council and representatives of a necessarily limited number of outside institutions to inquire into the whole question of the medical treatment of children attending public elementary schools within the county.

The Committee are advised that the greatest difficulty experienced by the hospitals is in dealing with the large numbers of children who present themselves for treatment of the teeth or the eyes, dental caries and errors of refraction being respectively the ailments for which treatment is usually desired. The Committee, with a view to making the fullest possible inquiry into these matters, are anxious to obtain further information from the hospitals and dispensaries of London in respect of these classes of cases.

I am accordingly directed to ask you to be so good as to supply me with the information asked for on the accompanying schedule, if possible by 14th February, 1908, viz.:—(1) The number of children under 14 treated during the years 1906 and 1907 for various ailments of the teeth, distinguishing between treatment (*a*) for preservation, (*b*) extraction of teeth, and (2) with similar information for the same period in respect of children treated for various affections of the eye, distinguishing between (*a*) errors of refraction, (*b*) actual diseases, (3) what accommodation exists for the treatment of children under (1) and (2) respectively above, and whether it would be practicable to treat larger numbers of children during the regular hours of work of the institution, or to use the institution under special arrangements outside the regular hours for the exclusive treatment of elementary school children.

The Committee desires me to express the hope that if it be found necessary to submit this letter to the Hospital Committee, arrangements will be made in the meantime for the preparation of the necessary information, inasmuch as it is desired that the return for the various hospitals and dispensaries of London shall be printed and submitted to them at their next meeting, which has been fixed for Friday, 21st February, 1908.

We reproduce the table in which the replies received were summarized by the subcommittee. We also give a map of the county of London showing the position of hospitals and dispensaries, which reveals, what is of course well known to every one who has given attention to the subject—that institutions for medical relief are very much concentrated in the central districts. The figures on the map show the number of children of school age in the various districts.

Among the appendices is a report made in November, 1907, by the Day Schools Subcommittee on the work of the medical officer. The report states that it was found that medical inspection created a demand for medical attendance, and that that demand did not produce a corresponding supply. It could now be shown in full detail

that the health of many children was impaired, temporarily or permanently, for want of medical treatment. It could also be shown that, in a considerable proportion of cases, medical treatment was practically unattainable. The medical officer (Education) had a medical staff consisting of two full-time doctors, two half-time doctors, twenty-three quarter-time doctors, and thirty-two nurses under a superintendent. The whole of this staff was employed in inspectorial work alone. The report then gives some particulars of the number of children found defective in respect to vision, hearing, ringworm, teeth, and tuberculosis (external), and the committee states that the facts point to the general conclusion that there were two classes of cases which the hospitals found unmanageable: the mere weight of numbers seemed to prevent their dealing adequately with the very common forms of childish defects (vision, hearing, ringworm, teeth), while they had equal difficulty in dealing with chronic cases demanding prolonged treatment (tuberculosis). Up to the present time the powers of the Council had been limited to inspection. As a result of that inspection, many preventable but unremedied evils had been discovered, and fresh powers and fresh duties had now been laid upon education authorities by Parliament.

Following this report are memoranda and notes of evidence taken by the subcommittee under the heads (*a*) as to the teeth, (*b*) as to vision, (*c*) as to ringworm and favus, (*d*) as to suppurating ears and adenoids, and (*e*) as to tuberculous disease. The general conclusion as to the last-named has already been given in the JOURNAL, but is of so much importance that it may be here reproduced:

TUBERCULAR AND DEBILITATED CHILDREN SUITABLE FOR TREATMENT IN RESIDENTIAL CONVALESCENT SCHOOLS OF RECOVERY—*General.*—For a number of tubercular children, especially those suffering from bone or joint disease, there is little in the way of prevention in the earlier stages, and the hospitals generally do most in relieving the urgent stages comparatively late in the disease. There are also large numbers of children with diseases causing much damage, such as small ulcers on the surface of the eye, troubles about throat, nose, or ears, which become most chronic, the children known as quite typical to every one who has sat on attendance committees, whose parents are quite anxious for their health, but who are pale, of fair complexion, dark rimmed round the eyes, who do not sleep well at night, and on the other hand can hardly be wakened in the morning, will scarcely touch breakfast, often indeed are sick either before starting or even on getting to school, and are essentially the result of their environment, reacting on a delicate organization, and for whom the only hope of satisfactory escape from severe damage is removal from their surroundings for two or three or more months until health is re-established. All this class of children might be considered as suitable for treatment in residential convalescent schools.

Under the heading (*f*) "provision for treatment," notes of evidence given by Mr. C. H. Warren, representing the Provident Medical Association, and Mr. T. Hancock Nunn, representing the Juvenile Benefit Society, are given.

PROVIDENT DISPENSARIES.

Mr. Warren stated that there were 38 provident dispensaries and medical clubs in the London County Council school area; 18 of these were under the control of the Metropolitan Provident Medical Association, the others were independent institutions, more or less in touch with and represented on the London Provident Dispensaries Council. Attached to these dispensaries there were upwards of 320 general medical practitioners and dental surgeons. About 110,000 persons were enrolled as provident members of these institutions, some 50,000 being children. In return for regular payments on the principle of insurance, medical treatment was given to members whenever required. Each member joining selected from the staff his own medical attendant who became the family doctor. Patients suffering from special ailments requiring hospital or other treatment were usually sent to the most suitable institution. The conditions for medical treatment by the Provident Medical Association were that persons should join while in health—children being only admitted with a parent or guardian—and that payments should be kept up during health and sickness. Medical attendance was given at the dispensaries, in the doctors' surgeries, and in the homes of the patients. The benefits of provident dispensaries were limited to those who were unable to pay ordinary medical fees. The usual rates of payment were 6d. a month for adults and 2d. a month for children, 1s. 6d. a month being the maximum charge for a family. The object of provident dispensaries was to provide through the general practitioners medical treatment for ordinary ailments of working-class families. They were not at present equipped for dealing extensively with cases of dental caries, errors of refraction, suppurating ears, etc., these being usually treated, if at all, in general or special hospitals to which they were often sent on the recommendation of the dispensary medical officer. To deal with these cases satisfactorily it would be necessary to enlarge the equipment of the dispensaries, and, in some cases, to make special appointments on the staff. A start in this direction could be made without much delay in the dispensaries of the Metropolitan Provident Medical Association, and no doubt the system would be extended through the influence of the London Provident Dispensaries Council to the other provident dispensaries of London.

In reply to the question whether the Provident Dispensaries Council could arrange for the medical treatment of children not members of a provident dispensary and unable to pass a medical examination, Mr. Warren said that the provident dispensary only dealt with those persons and families who had made provision for medical treatment by joining before illness overtook them. The scale of fees charged was in every case designed on the principle of insurance, and not as a payment for an actual illness. But in the majority of provident dispensaries, including all those controlled by the Metropolitan Provident Medical Association, provision had been made for persons requiring immediate treatment, who paid a special entrance fee with a view to their remaining as provident members after the particular illness. An arrangement could be organized by the provident dispensaries in co-operation with the London County Council for the treatment of children not members of a provident dispensary—so long as the interests of the general practitioners were safeguarded, and an endeavour was made to enrol the parents of such children as provident members. For such cases of special treatment payment in accordance with a fixed scale would have to be made either by the parents of the children or, failing that, by the London County Council. At present the Metropolitan Provident Medical Association only dealt with a very limited number of children, but the system was very elastic and was designed to cover London working-class medical treatment.

To carry out medical treatment of school children would require the co-operation of the body of general practitioners in London and would entail the development of many special forms of treatment—for instance, in cases of weakness in the teeth, eyes, and ears of children, which had not up to the present been needed or practicable. In co-operation with the London County Council the Metropolitan Provident Medical Association and the London Provident Dispensaries Council would endeavour to make their organizations meet the required want, and open dispensaries or clubs in working class districts. This would require time to accomplish, and must be preceded by an arrangement securing the services of a much larger body of medical practitioners than was at present attached to the dispensaries. Such an arrangement could probably be made, and would be immediately attempted if the London County Council gave encouragement. The advantages would be that a system would be created on a natural basis, in which parents, the medical profession, and public spirited persons of the class now managing the hospitals, would all take a share, and be interested in securing satisfactory medical arrangements for children, on the footing that the bulk of the cost was found by provident subscriptions or parents, in the same manner in which the English working classes were accustomed to provide for their own sickness, through subscriptions to friendly societies, and that the whole responsibility for the children's health and the great cost of their medical attendance should not be thrown on the local education authority and the rates. It would be better for the community that a sound general system should be adopted at first, although it might only be possible to bring it gradually into complete order, and adapt it to the wants of the families as experience demanded.

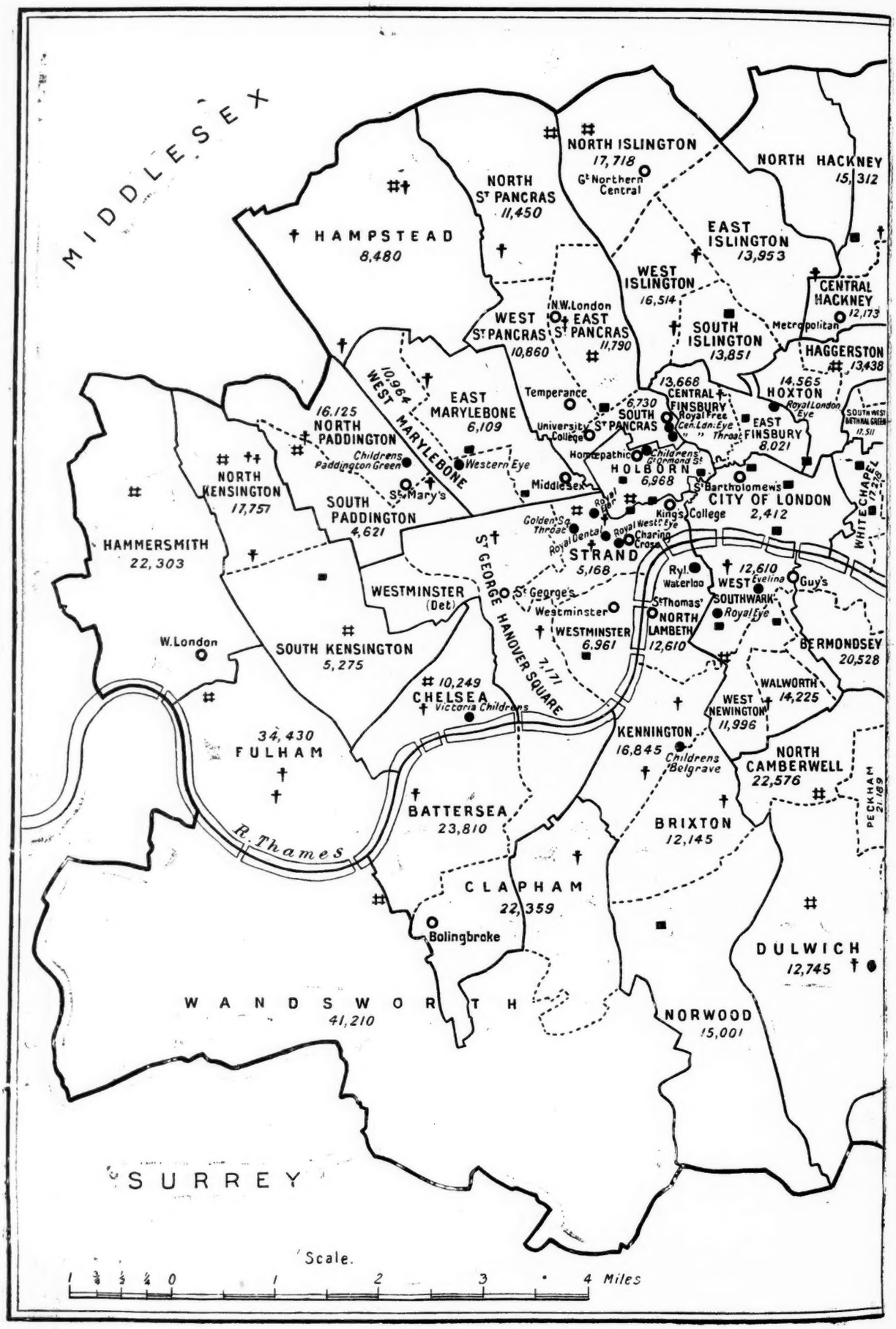
JUVENILE BENEFIT SOCIETY.

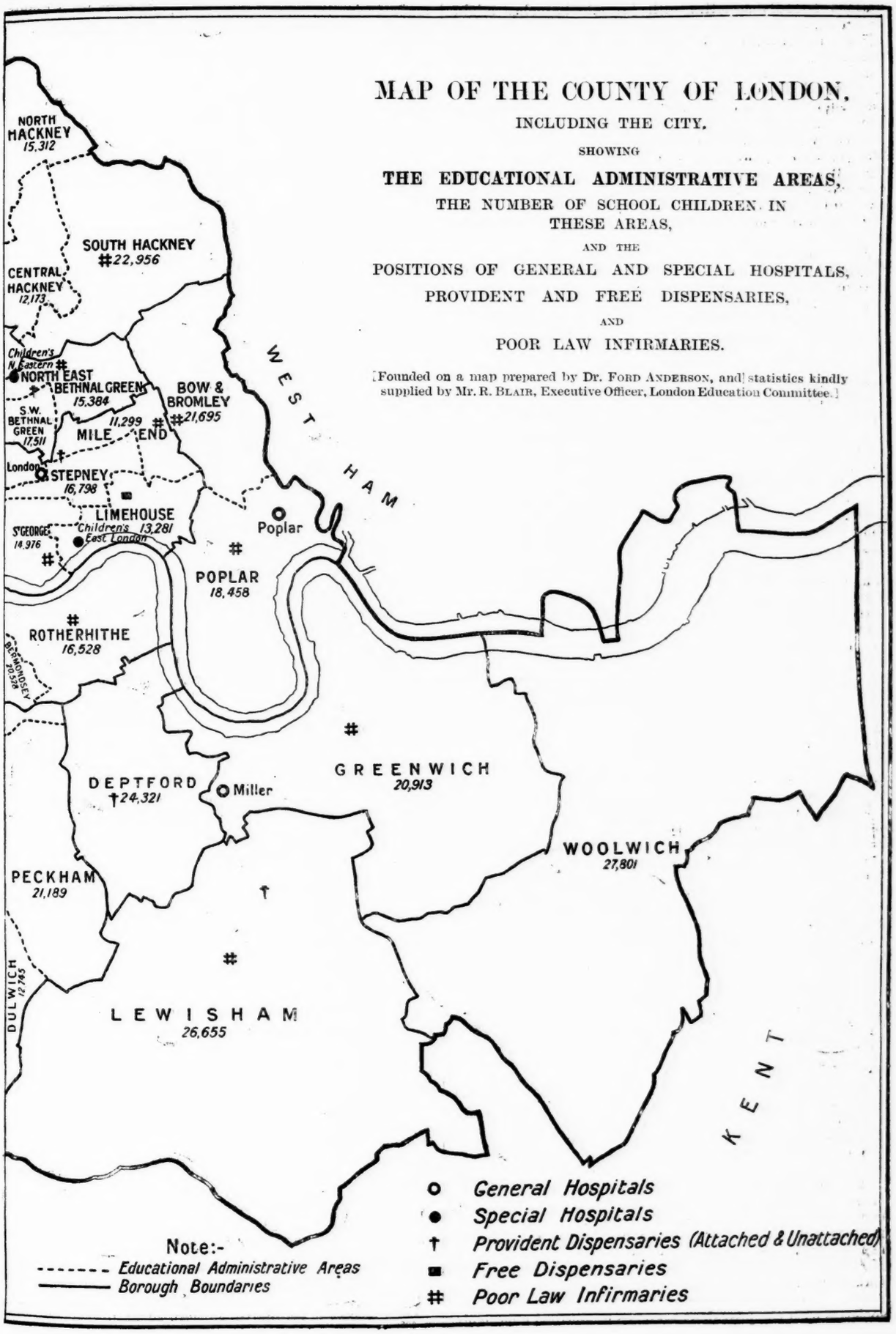
Mr. Hancock Nunn considered that the Juvenile Foresters movement was capable of great extension, particularly in the direction of the development of

Summary of Replies from Hospitals Dispensaries, and other Institutions.

Name of hospital, dispensary, or institution. (1)	What number of children under 14 was treated during the years 1906 and 1907 for various ailments of the teeth, distinguishing between treatment (*a*) for preservation, (*b*) extraction of teeth? (2)	What number of children under 14 was treated during the years 1906 and 1907 for various affections of the eyes, distinguishing between (*a*) errors of refraction, (*b*) actual diseases? (3)	What accommodation exists for the treatment of children under (2) and (3) respectively? (4)	Would it be practicable (*a*) to treat larger numbers of children during the regular hours of work of the institution, or (*b*) to use the institution under special arrangements outside the regular hours for the exclusive treatment of elementary school children? (5)	Remarks. (6)
Brixton Dispensary	1906. 1907. (*a*) *Nil* *Nil* (*b*) 142 163	1906. 1907. *Nil* 23 } Nov. and *Nil* 18 } Dec. only.	—	No No, but would be willing to consider any proposal made to them by the Council	—
Brompton and Knightsbridge Dispensary	(*a*) None (*b*) 1906 1907 92	(*a*) Not dealt with (*b*) 1906 1907 4 11	(2) Dental department with honorary dental officer (3) No ophthalmic department	Much larger numbers could be treated during the working hours of the institution	—
Bloomsbury Dispensary	1906. 1907. (*a*) — — (*b*) 4 2	1906. 1907. (*a*) — — (*b*) 8 6	No special accommodation	Quite impracticable	—
Camberwell Provident Dispensary ...	1906. 1907. (*a*) 40 50 (*b*) 400 450 (*approximately*)	—	—	No	Eye cases are referred on to the hospitals.
Evelina Hospital for Sick Children ...	1906. 1907. (*a*) } 1,067 642 (*b*) }	1906. 1907. (*a*) } 295 215 (*b*) }	—	Yes, with larger staff	Owing to the hospital being closed for ten weeks the figures for 1907 are no criterion of the work done.
Forest Hill Provident Dispensary ...	(*a*) 20 25 (*b*) 55 65	(*a*) 4 6 (*b*) 96 108	None specially provided	Yes, under special arrangement	—
German Hospital	1906. 1907. (*a*) 187 166 (*b*) 208 118	1906. 1907. (*a*) 192 297 (*b*) 218 259	(2) Seen once a week in out-patient department (3) Seen in casualty department	No	—
Great Northern Central Hospital	(*a*) } 590 391 (*b*) }	(*a*) 251 262 (*b*) 331 369	Further reply will be sent	Further reply will be sent	—
Haverstock Hill and Malden Road Provident Dispensary	—	—	—	(*a*) No (*b*) Yes	—
Holloway and North Islington Provident Dispensary	No record kept	No record kept	—	(*a*) Yes	Would be glad to co-operate with the Council.
Hospital for Sick Children, Great Ormond Street	1906. 1907. 1,259 1,712	1906. 1907. 436 436	(2) The dental surgeon and the clinical assistant one afternoon a week (2) The ophthalmic surgeon one afternoon a week	Cannot give definite answer	—
Islington Dispensary	1906. 1907. (*a*) 10 10 (*b*) 50 50 (*approximately*)	1906–1907. (*a*) None (*b*) 150 (*approximately*)	A dentist attends once a week	No ophthalmic department, and no scope for one with existing buildings	—
Kilburn Provident Medical Institute ...	(*a*) 20 30 (*b*) 235 230 (*estimated*)	No record kept	One dentist, two eye experts, others will probably be added soon	Larger numbers could be treated, but must pay at institute rates	Prepared to test for errors of refraction at 3s. 6d. per child.
Metropolitan Dispensary	—	1906. 1907. (*a*) — — (*b*) Less than 100 (*estimated*)	Usual general dispensary accommodation	(*a*) No (*b*) Yes, by arrangement	—
Middlesex Hospital	(*a*) 217 99 (*b*) 144 114	(*a*) 990 1140 (*b*) 840 630	Could not deal with any larger number	—	—
Miller Hospital	(*a*) Not dealt with (*b*) 1377 1236 (*estimated*)	(*a*) 151 118 (*b*) 155 135	—	No	—
North-Eastern Hospital for Children ...	1905. 1906. (*a*) 653 682 (*b*) 750 700	1905. 1906. (*a*) 220 200 (*b*) 250 240	(2) 800 a year (3) 600 a year if the staff were added to	— Yes, if the staff were added to	—

Paddington Provident Dispensary ...	1906. 25 — 1907. 11	(a) *Nil* (b) Cases are sent in to hospital	—	—	—
Paddington Green Children's Hospital ...	(a) (b) 1906. 1,620 — 1907. 1,146	(a) (b) 1906. 367 — 1907. 579	Out-patient department	Accommodation utilized to the utmost extent	—
Queen Adelaide's Dispensary, Bethnal Green, E.	1906. (a) 134 (b) 653 — 1907. 108 568	No special eye department	—	The question would have to be considered by the Committee	—
Royal Free Hospital, Gray's Inn Road, W.C.	Only in-patients seen	175–200 a year	—	No.	—
Royal London Ophthalmic Hospital ...	—	(a) (b) — 8,760	Accommodation for 20 refraction cases per diem. No limit as to treatment of actual disease amongst deserving poor	(a) No, without increase of staff and expenditure (b) No	—
Royal South London Dispensary ...	(a) — — (b) 194 100	—	—	—	—
Royal Westminster Ophthalmic Hospital	—	1906. 1907. (a) 1,250 1,625 (b) 1,250 1,625 *(estimated)*	Usual out-patient accommodation	No	—
St. Bartholomew's Hospital	About 6 a morning	(a) (b) 1906. 1,301 — 1907. 1,580	Present accommodation ample	Question would need consideration	—
St. George, Hanover Square, Provident Dispensary	(a) No stoppings undertaken. (b) 1906. 118 — 1907. 122 (Children and adults)	(a) Not dealt with (b) About 20 cases a year (Children and adults)	(2) About 3 or 4 additional cases a week (3) About 12 cases	All patients must conform to the rules of the institution	—
St. George's Hospital	(a) Not dealt with (b) 1906. 346 — 1907. 304	1906. 1907. (a) 200 200 (b) 150 150 *(approximately)*	Properly constituted rooms and nurses in attendance	No	—
St. Marylebone General Dispensary ...	(a) (b) 1906–7. 450 *(estimated)*	1906–7. (a) 300 (b) 100 *(estimated)*	—	Yes	The institution would willingly help the Council in the matter.
St. Mary's Hospital	—	1907. July to December (a) 141 (b) 208	Sufficient for present requirements with margin for increase	Possibly, by remodelling arrangements	—
St. Pancras Northern Dispensary ...	(a) 1906. — — 1907. —	(a) 1906. — 1907. 25 (During nine months only)	(2) Insufficient accommodation	Yes, if the Council made a sufficient grant	—
	(b) 717 631	(b) — 5			
St. Thomas's Hospital	1906. 1907. (a) *Nil* *Nil* (b) 1,090 878	1906. 1907. (a) 723 720 (b) 462 396	(1) In the general out-patient department (2) In the special ophthalmic department	(a) No (b) No facts to guide them in coming to a decision	—
Surgical Aid Society	All adults	1906. 1907. 150 200	—	No	—
Victoria Hospital, Chelsea, S.W.	1906. 1907. (a) *Nil* *Nil* (b) 679 718	1906. 1907. (a) 635 605 (b) 91 92	(2) One dental chair available one morning a week (3) One room available one morning a week	Not without additional staff	—
Western General Dispensary, Marylebone Road	1906. 1907. (a) — — (b) 408 370	(a) (b) 390 279	—	No, excepting for extraction of teeth	—
Westminster Hospital	(a) 110 120 (b) 534 470 *(approximately)*	(a) (b) 242 253	Existing accommodation sufficient for number at present treated	Would consider any definite proposal	—


MIDDLESEX
NORTH ISLINGTON
17,718
G' Northern Central
NORTH HACKNEY
15,312
NORTH ST PANCRAS
11,450
HAMPSTEAD
8,480
EAST ISLINGTON
13,953
WEST ISLINGTON
16,514
CENTRAL HACKNEY
12,173
N.W.London
WEST ST PANCRAS
10,860
EAST ST PANCRAS
11,790
SOUTH ISLINGTON
13,851
Metropolitan
HAGGERSTON
13,438
10,964
WEST MARYLEBONE
EAST MARYLEBONE
6,109
Temperance
13,668
CENTRAL FINSBURY
Royal Free
14,565
HOXTON
Royal London Eye
16,125
NORTH PADDINGTON
Childrens Paddington Green
Western Eye
University College
6,730
SOUTH ST PANCRAS
Royal Free Cen. Lon. Eye
EAST FINSBURY
8,021
Homœopathic
Childrens Gt Ormond St
HOLBORN
6,968
St Bartholomews
CITY OF LONDON
2,412
NORTH KENSINGTON
17,757
St Mary's
Middlesex
SOUTH PADDINGTON
4,621
Golden Sq Throat
Royal Dental
Royal West Eye
Charing Cross
King's College
STRAND
5,168
HAMMERSMITH
22,303
WESTMINSTER (Det)
St George's
Westminster
WESTMINSTER
6,961
Ryl Waterloo
12,610
WEST
Evelina
Guy's
SOUTHWARK
Royal Eye
NORTH LAMBETH
12,610
W.London
SOUTH KENSINGTON
5,275
BERMONDSEY
20,528
10,249
CHELSEA
Victoria Childrens
7,171
WALWORTH
14,225
WEST NEWINGTON
11,996
34,430
FULHAM
KENNINGTON
16,845
Childrens Belgrave
NORTH CAMBERWELL
22,576
BATTERSEA
23,810
BRIXTON
12,145
R. Thames
CLAPHAM
22,359
Bolingbroke
DULWICH
12,745
WANDSWORTH
41,210
NORWOOD
15,001
SURREY
Scale.
1 ¾ ½ ¼ 0 1 2 3 4 Miles


MAP OF THE COUNTY OF LONDON,
INCLUDING THE CITY.
SHOWING
THE EDUCATIONAL ADMINISTRATIVE AREAS,
THE NUMBER OF SCHOOL CHILDREN IN THESE AREAS,
AND THE
POSITIONS OF GENERAL AND SPECIAL HOSPITALS, PROVIDENT AND FREE DISPENSARIES,
AND
POOR LAW INFIRMARIES.
[Founded on a map prepared by Dr. FORD ANDERSON, and] statistics kindly supplied by Mr. R. BLAIR, Executive Officer, London Education Committee.]
NORTH HACKNEY 15,312
SOUTH HACKNEY #22,956
CENTRAL HACKNEY 12,173
Children's
N. Eastern
NORTH EAST BETHNAL GREEN 15,384
S.W. BETHNAL GREEN 17,511
11,299
MILE END
BOW & BROMLEY #21,695
London
STEPNEY 16,798
LIMEHOUSE Children's 13,281
East London
ST GEORGE 14,976
Poplar
POPLAR 18,458
ROTHERHITHE 16,528
BERMONDSEY 20,528
GREENWICH 20,913
DEPTFORD †24,321
Miller
WOOLWICH 27,801
PECKHAM 21,189
DULWICH †2,745
LEWISHAM 26,655
KENT
WEST HAM
Note:-
Educational Administrative Areas
Borough Boundaries
General Hospitals
Special Hospitals
Provident Dispensaries (Attached & Unattached)
Free Dispensaries
Poor Law Infirmaries

outside dispensaries, and suggested that the Council should help in the endowment of dispensaries to which the various friendly societies with juvenile branches might contribute. The Council's aid, added to the subscriptions of the societies, would enable the dispensaries to be efficiently equipped, the absence of such equipment being the parents' chief reason for preferring hospitals, and would thus result in an almost ideal system of medical aid. The children would be drawn together in the school, and would receive medical attendance provided for them outside the school, thus encouraging mutual help by means of the Foresters' Courts, and at the same time securing medical inspection by dispensaries established in the neighbourhood of the school endowed and equipped by the local authority, but towards which the children would contribute the actual cost of the medical treatment.

Mr. Nunn stated that in Hampstead as many school children as possible were urged to belong to a good benefit society for providing against illness, the necessary medical treatment being provided by a medical officer paid at the rate of 4s. 4d. a child per annum. The principle was that of the Foresters' Society, which enabled children to join a court at a very early age and receive a small allowance during sickness and medical attendance for a payment varying from 2d. to 6d. a month. Each court selected its own medical adviser, who could deal with children's teeth in the early stages, and when necessary perform extractions, but where special treatment was required a letter of admission to a hospital was given. The fees paid by children at Hampstead, all of whom were of the working class, were 2d. below 5, and from 4d. to 8d. from 5 up to 14 and upwards. Parents did not, as a rule, apply for treatment for teeth; it would, if necessary, be given, and up to a certain point the expense borne by the society's dispensary; no special dentist had been appointed, but an arrangement might possibly be made to do so. The institution by the Council of a gratuitous system of treating children's teeth would discourage members, and result in the movement being practically swept away. Slate clubs, which had the greatest hold on the people in the poorest parts, did not reach the children. He desired that the provident dispensaries should be brought into co-operation with the distinctly educational movement for the formation of juvenile courts of Foresters and Oddfellows within the schools.

With regard to the extent to which the dispensary movement and the friendly societies movement could be made to act in direct co-operation, he stated that in various provincial towns there had already been formed some thirty or forty medical associations of all the friendly societies in the town for the purpose of providing medical attendance and drugs for their members, the families of members being allowed to join the dispensaries thus formed without necessarily qualifying for membership of any one of the societies by passing the doctor. The juvenile friendly societies existed for those who were certified as healthy. A system which linked the educational and social value of the juvenile friendly societies movement with the care of all the sick members of a family at a local dispensary seemed to meet the need with which the London County Council was faced. In London the juvenile branches of friendly societies were unprepared to provide the nursing, the surgical appliances, surgical operations, and the convalescent treatment indicated in the reports of the medical inspectors. They, however, expressed willingness to consider the new problem presented by the results of medical inspection. The juvenile branches of friendly societies were as a rule financially well off, so much so that the question of dealing with the surpluses accumulated was constantly attracting the attention of those who organized such societies. He thought it would be possible in the future so to organize the dispensaries and juvenile friendly societies as to enable them to deal with a very large proportion of cases.

The School Care Committees were in touch with associations which had for their object the care of children, especially of sick children. On most of the Care Committees the Charity Organization Society was largely represented, and members of the Children's Country Holiday Fund, the Invalid Children's Aid Association, the Children's Aid Society, and similar associations were to be found. He thought it certain that a combination of these societies with the provident agencies might deal effectively with the whole problem, especially if the suggestions of the Board of Education in its last circular as to grants made to institutions dealing with children's diseases were carried out. If provident dispensaries already existing or established in the future were aided by grants, they might provide eventually near to every school all the necessary medical and surgical treatment the cases required. He summarized his suggestions in the following sentence: To strengthen the provident dispensaries in operation and the juvenile branches of the friendly societies of the district, and to seek through our care committees for the co-operation with them of all the other agencies in a given district which deal with cases of sick children.

THE TRUCK ACTS AND THE MEDICAL PROFESSION.

THE report of a committee appointed early in 1906 "to inquire into the operation of the Truck Acts, and to consider and report what amendments of extensions of those Acts or changes in their administration are desirable" was issued on January 2nd. It recommends an important change in the law so far as it relates to deductions from wages in respect of medical attendance and expenses. As the law now stands, deductions from wages are subject to strict regulation, but contracts between employers and workmen for the provision of medical attendance and medicine are among the matters in respect of which an exception was made in the Truck Acts to the general principle of payment in money and not in kind. In the report of the Medico-Political Committee of the British Medical Association on the working of the Truck Acts as regards medical attendance[1] it was stated that the position of employer and workman now is that the employer, in consideration of the sums which the workman, by a signed agreement, authorizes him to deduct from wages, is under a contract to supply medical attendance and medicine, but is not under an obligation to expend the whole amount deducted from wages in the provision of such attendance. He may make a profit for himself or incur a loss, or he may devote part of the money to other objects for the welfare of the workmen. He is a contractor. So long as he fulfils his contract by supplying medical attendance and medicine, his obligation is discharged.

With the object of ensuring that if any deduction for medical expenses be made, it shall all be devoted to the needs of the particular workman, the Truck Act Committee makes the following recommendations:

That in respect of medicine and medical attendance:
(*a*) The exception in Section 23 of the Act of 1831, empowering the employer to contract to supply his workmen with medical attendance, etc., should be repealed;
(*b*) The doctor or doctors must be the choice of the workmen themselves;
(*c*) The contributions may either be collected by the workmen and paid over direct to the doctor, or may, at the request of the workmen, be deducted by the employer from the wages for the purpose of being paid over either to the workmen's representatives or to the doctor under arrangements made between employers and workmen;
(*d*) No commission on account of the services rendered by the employer in this transaction should be allowed by law.

These recommendations in some respects accord with, and in others are contrary to, the views of the medical profession, as expressed by the Medico-Political Committee of the Association. That committee stated that in the medical profession it appeared to be generally felt that compulsion was justified on the ground that it was to the interest of the general body of workmen and the average individual workman, regarding his life as a whole, that an obligation to consent to a deduction for medical expenses should be imposed. But in recommending that the workman should be at liberty to choose his own attendant, the Truck Act Committee appear to have taken cognizance of the following passage in the report of the Medico-Political Committee:

The conclusion arrived at by the British Medical Association, as the result of inquiries and deliberations extending over three years, has been that, generally speaking, medical attendance under contracts of any kind will be most satisfactorily given when the individual patient is allowed, so far as the circumstances of the district permit, to choose his own doctor.

[1] SUPPLEMENT to the BRITISH MEDICAL JOURNAL, June 20th, 1908, p. 426.

THE COMPARATIVE ANTISEPTIC VALUE OF DISINFECTANTS.

THE methods hitherto employed for the standardization of disinfectants have been confined almost entirely to the determination of their direct germicidal action when the bacteria have been exposed to the action of solutions or emulsions of the disinfectant. To all of those methods objection has been made on the ground that the germicidal action was determined under conditions which did not correspond to those in actual practice when disinfection was carried out on a large scale. Dr. S. B. Schryver and Dr. R. Lessing, who have recently undertaken a fresh investigation, gave an account of their results before a meeting of the London Section of the Society of Chemical Industry on January 4th. Their communication was entitled "A Physio-chemical Method for Comparing the Antiseptic Value of Disinfectants."

Dr. Schryver, who read the paper, said that of the various methods proposed for determining the antiseptic value of the numerous products, proprietary and others, which had in recent years been employed for the purposes of disinfection, perhaps the best known were the "thread method" of Koch, the "garnet method" of Krönig and Paul, and the method, which had been extensively employed in this country, of Rideal and Walker. In the Rideal-Walker method definite small amounts of broth culture of the same species and age were added to a constant volume of a disinfectant solution. A series of trials were made with varying concentrations of the disinfectant to be tested, and of pure phenol under similar conditions, and the relative concentrations necessary to complete germicidal action within equal periods of time was thereby determined. The ratio of the reciprocals of those concentrations was termed by Rideal and Walker the "carbolic acid coefficient," and was regarded by them as the standard of disinfecting power. Various objections had been made to this method, chiefly on the ground that the actual test for disinfection was carried out in the absence of organic matter other than that present in the disinfectant and the minute amount introduced by the bacterial culture, and the conditions of the trial were not therefore entirely analogous to those under which antiseptics were ordinarily employed. Somerville and Walker had endeavoured to remedy that defect by carrying out the disinfecting test in the presence of known quantities of added organic matter, such as protein and starch, and had in some cases obtained widely different numbers for the carbolic acid coefficient. The addition of organic matter could act in different ways with different disinfectants. In some cases—as, for example, in that of permanganate—the disinfectant could be directly destroyed by acting as an oxidiser to the organic matter; in other cases the disinfectant could be dissolved by the organic matter and thus removed from solution and its sphere of activity, an action which was conceivable when disinfection was carried out in the presence of fats by substances soluble in such organic solvents. A still more complicated case was that in which absorption of the disinfectant by the organic matter took place, a process which probably accounted for the behaviour of certain antiseptics recently investigated by Ehrlich and Bechhold. In all such cases the addition of organic matter would considerably lower the carbolic acid coefficient. Nor need such a lowering of the coefficient always indicate a diminished practical value. It was not possible, for example, that the disinfectant might be absorbed by solid matter; if the latter were the material required to be disinfected, it would, after the separation from the surrounding liquid matter, contain a higher percentage of the disinfectant than the latter, in which case a lowering of the carbolic acid coefficient by the addition of organic matter should denote an increased practical efficiency. One more action of organic matter deserved consideration: Many of the more recently-introduced disinfectants were emulsions, and it was generally admitted that their efficiency depended to a great extent on the degree of emulsification, for the addition of organic matter might either accelerate or inhibit the rate of de-emulsification, and thus, in a purely physical way, either decrease or increase the practical value. The problem raised by the introduction of organic matter was therefore one of great complexity, and as the mere germicidal value as indicated by the various methods already mentioned was regarded as an insufficient test of the practical efficiency of an antiseptic, the authors suggested that a new method might throw some further light on the question. The rate of chemical change produced in a "substrate" by bacterial infection might be regarded as a measure of the vigour of the growth. By introducing substances inimical to the bacteria the rate of growth might be inhibited or even entirely arrested. The principle of the method of the authors depended essentially upon the measurement of inhibition produced when varying quantities of an antiseptic were added to an infected medium, and comparing those quantities with the amounts of phenol or any other standard disinfectant which would produce the same result. Of the chemical changes produced by bacteria, those of protein degradation or conversion of dextrose into lactic acid both lent themselves to chemical measurement. A measurement of the rate of putrefactive change in a gelatine-peptone substrate had been already carried out by one of the authors of the paper.* In that case a meat essence was infected with putrefying liver, and the nitrogen determined in the filtrate from the precipitate produced by adding a given volume of tannic acid mixture to a given volume of the medium removed from the main bulk after different intervals of incubation. This purely chemical method involved a relatively large amount of labour and was impracticable, but it was necessary to measure the rate of change which took place in different concentrations of an antiseptic, owing to the large number of analyses involved. Fortunately, the chemical change, in the case of protein degradation at any rate, closely corresponded to certain changes in the physical properties which could be readily and accurately measured, and in the method now brought forward the electrolytic conductivity had been taken as the index of chemical change. That physical property had already been employed for studying protein changes, notably by Sjöqvist, Oker-Blom, and Bayliss. The medium used in the author's experiments had been either gelatine-peptone or sodium caseinogenate-peptone mixture containing about 5 per cent. of gelatine or sodium caseinogenate — that is, caseinogen dissolved in the requisite amount of sodium hydroxide—and 1 per cent. Witte's peptone. In all cases a mixed infection by faeces had been employed, as it was found to produce a much more rapid change in the substrate than was produced by the inoculation with a pure strain, probably owing to the fact that the action of the different species was specific, some degrading the protein to albumoses or proteoses, others acting only on those latter bodies, and others again only on amino-acids, as shown by Nawiasky. A similar method of infection had also been employed by Mr. Wynter Blyth. The relationship between electrolytic conductivity and protein degradation had already been determined by Bayliss in his investigations on the action of trypsin on caseinogen, where he found that the curves representing the conductivity of the caseinogen solution in different stages of digestion and the nitrogen in the filtrate from the tannic acid precipitation were very similar in form. An experiment was carried out to determine the influence of varying quantities of antiseptic on the form of the conductivity curve, and it was found that no putrefaction took place within four days, when the concentration of the phenol reached 0.1 per cent. A concentration of 0.05 per cent. was, however, insufficient altogether to stop putrefaction within that period, although it considerably impeded it. Caseinogen solution underwent a small change on incubation, even in the absence of putrefaction; the alteration in conductivity was, however, small, when compared with the changes produced by putrefaction. For that reason the gelatine-peptone mixture was to be preferred when testing the efficiency of antiseptics. In that latter medium the changes were small. The addition of mercuric chloride diminished the resistance of the substrate; formalin, on the other hand, increased it, owing probably to its capacity to enter into chemical combination with amino-derivatives. The disinfectants themselves also exerted sometimes small changes when present in large quantities, owing to their acid or basic characters. In no case, however, could such changes be mistaken for putrefactive alteration. The

* Schryver, Report No. 1, Inspector of Foods Department, Local Government Board.

factors concerned in the process of disinfection were so complex that the authors had for the present avoided the use of the word "standardization" in their description of the suggested methods. Nor had they attempted so far to express any numerical relationship when comparing the antiseptic value of the different disinfectants examined. There were, however, various methods by means of which such a relationship might be fixed; the most feasible would be to determine the relative quantities of the disinfectant which were just necessary entirely to inhibit putrefaction during a given interval. In their experiments no change was produced in the substrate when phenol was in the concentration of 5 parts per mille, although a considerable amount took place with 2.5 parts per mille. The amount necessary for total inhibition lay somewhere between those limits. By taking a larger number of dilutions those limits could be considerably narrowed and the relative amounts just necessary to inhibit putrefaction within a given time ascertained. The method suggested had many advantages, notably the small amount of time and labour involved and the simplicity of manipulation. It was furthermore adaptable to a large number of conditions, varying substrates and disinfectants in different physical forms, such as powders, emulsions, or organic solvents. It was hoped that that wide range of applicability would render the method acceptable to those engaged in the examination of antiseptics.

Dr. William Dreyfus (New York) asked if the authors of the paper had made any comparative tests between their method and that known as the Rideal-Walker. At first sight the method described by the authors seemed complicated.

Dr. Sommerville said he would prefer to read the paper first before discussing it in detail, and he was followed by Mr. Wynter Blyth, who pointed out that the method gave high results for substances which were regarded at the present time as poor disinfectants. That might be because the old method of testing was wrong, but it was for the authors to prove their method was right.

Dr. Rideal said that the paper had opened up a new field of work. He thought the method was applicable to the determination of questions concerning preservatives and antiseptics. In his opinion, the data were not sufficient to ascertain whether the solutions were of uniform resistance. He considered that it was better to measure the amount of change by some chemical rather than by any physical method. He felt a doubt as to what was really meant by the difference in the conductivity of solutions. He criticized the method of the authors in using faeces of unknown origin containing "a mob of organisms" of different kinds. It was difficult to ensure that any given sample of faeces contained the right amount of bacteria in the right proportion to grade the gelatine in the way suggested by the authors. That must be considered before the test could be regarded as a practical one. He himself and Dr. Walker had never put forward their method as a means of determining the way in which disinfection did its work; their method simply enabled the manufacturer, the buyer, and the seller to see that they were getting an article supplied according to original sample; it was a commercial method to judge whether an article was up to specification.

Dr. Bousfield doubted whether there was any possibility of finding a test for disinfectants perfect from an academical as well as from a practical point of view.

Dr. Lessing, who replied, said that the method he and Dr. Schryver advocated would be found on comparison with other methods to be most nearly in correspondence with the conditions of actual practice. As in practice pure cultures never had to be dealt with, ordinary faeces had been used.

A society for the reduction of infant mortality has been founded at Moscow.

Under the will of the later Mrs. Frances Roget, of Maida Hill, the National Society for the Employment of Epileptics, and the National Hospital for the Paralysed and Epileptic, each receive a sum of £1,000, a further sum of £500 going to the Home for Epileptics at Maghull.

Mr. Alexander Robb, M.A., M.B., C.M., has been appointed Medical Officer for the Counties of Midlothian, Linlithgow, and Peebles, in succession to the late Dr. Brock. Dr. Robb has been medical officer of health for the Burgh of Paisley since 1901.

LACTIC FERMENTS FOR PRODUCTION OF SOUR MILK.

In consequence of the demand which has arisen for sour milk corresponding to the Bulgarian "yoghourt," a number of firms have placed on the market preparations of the bacteria necessary for its production; we have received several of these for examination, and the results of the tests carried out are given below. All but one of the preparations are in the form of tablets, and are intended to be taken by themselves, in addition to their employment in souring milk, for the purpose of obtaining a good growth of lactic and bacilli in the intestine.

The samples examined, and the principal parts of the directions given in each case were as follows:

Fermenlactyl Tablets.—Prepared by the Pasteur Vaccine Co., Paris; English Agents, The Anglo-American Pharmaceutical Co., Ltd., Frith Road, Croydon. Directions: Boil the milk for ½ hour, remove film from surface, cool to 40° C. (104° F.), add 10 to 12 tablets crushed, to each pint, maintain at 40° C. for 10 to 12 hours. Sample received, February, 1908.

Lactobacilline Tablets.—Prepared by la Société le Ferment, Paris. Directions: Boil the milk for 10 minutes with stirring, cool to 38° C. (100° F.), add 8 tablets, rubbed down, to each pint, maintain at about 38° C. for 10 to 12 hours. Sample received, November, 1908.

Oppenheimer's Cultures in Tubes.—Supplied by Messrs. Oppenheimer and Co., Ltd., 179, Queen Victoria Street, London, E.C. This is a liquid preparation, contained in hermetically sealed tubes, the amount in one tube being intended for one pint of milk; the mixture to be kept at 40° C. for 8 to 10 hours. Sample received, November, 1908.

Sauerin Tablets.—Supplied by Messrs. Allen and Hanburys, Ltd., Lombard Street, London. Directions: Boil the milk, cool to 40° C., add 3 tablets, crushed, to each pint, set aside in warm place for 6 or 8 hours. Sample received, December, 1907.

Trilactine Tablets.—Supplied by Mr. W. Martindale, 10, New Cavendish Street, London, W. Directions: Boil the milk for 1 hour, cool to about blood heat, add 2 tablets, crushed, to each pint, maintain at the same temperature for 6 to 10 hours. Sample received, November, 1908.

For purposes of comparison, a temperature of 40° C. and a time of ten hours were employed in all cases. It has been pointed out in a recent article by Dr. R. W. Allen (British Medical Journal, November 28th, 1908, p. 1605) that it is highly desirable to keep the milk at or near boiling point for an hour before sowing it with the lactic bacilli; two series of tests were therefore made, in one of which the milk had been brought to the boil and then allowed to cool, while in the other it was brought to the boil and then kept in a boiling-water bath for one hour and subsequently cooled. The lactic acid formed was ascertained by titrating a portion of the milk with standard alkali solution. The milk employed at first was the ordinary supply of one of the large dairy companies in London. This was practically neutral to begin with; a portion of it was incubated at 40° C. for ten hours, and was then found to contain 0.04 per cent. of lactic acid; another portion was heated to boiling, then cooled, and incubated at 40° C. for ten hours, and was then found to contain only the same negligible trace of acid that was originally present. A portion of the milk which had been boiled was then treated with each of the preparations named above, using the proportions directed; portions of the milk that had been kept at boiling point for an hour were similarly treated, and the whole incubated for ten hours at 40° C. The acidity developed in each was then ascertained by titration, and the results are given in the columns headed I in the table. As the results in most cases were lower than was expected, the remainder of the milk cultures was set aside for a further twelve hours; for this second period the temperature was allowed to fall gradually from 40°, and for a considerable part of the time it was about 10° C. The acidity of the different specimens was then again determined, and these results are given in the columns headed II. The plain milk so treated developed 0.26 per cent. of lactic acid, and the milk that had been boiled but had received no addition showed 0.03 per cent.

Another lot of milk was obtained from a country dairy, and carefully tested to prove the absence of preservatives; this was heated to boiling, and kept in a boiling-water bath for an hour. A further series of incubations at 40° for ten hours was made with this; the results are given in the column headed I A.

Percentage of Lactic Acid Produced.

Sample.	Milk brought to boil only.		Milk kept at Boiling Temperature for 1 hr.		
	I. 10 hrs.	II. 22 hrs. (partly cold).	I. 10 hrs.	I A. 10 hrs.	II. 22 hrs. (partly cold).
Fermenlactyl tablets	0.00	0.10	0.00	0.00	0.13
Lactobacilline tablets	0.00	0.05	0.00	0.02	0.10
Oppenheimer's cultures ...	1.02	1.10	0.75	0.96	0.98
Sauerin tablets	0.04	0.23	0.03	0.07	0.21
Trilactine tablets...	0.00	0.09	0.03	0.27	0.26

Some irregularities are shown by the results of different tests on the same product, and this appears to be due to variations in the individual tablets and cultures. The actual formation of curd was approximately proportional to the acidity found by titration. The product was agreeable to taste, and free from bitterness in each case.

THE HISTORY OF THE ELEMENTARY SCHOOL CHILD.

VI.—School Inspectors.

Nowhere in the school machinery is there such overlapping as in the inspection of schools, and nowhere is there more need for reorganization. There seem to be two great faults in the choice of inspectors: in the first place nearly all are men, and in the second they are chosen for their academic attainments rather than their practical knowledge of teaching. Though many inspectors have had a distinguished university career, it may safely be asserted that only in most exceptional cases have they taught in schools themselves. It follows that they are not qualified to criticize and direct work of a special character beset with such peculiar difficulties as that in the elementary schools. Education authorities draw up syllabuses and frame a general plan, but it is for the inspectors to see whether it works well or ill, to see that it is modified to suit different conditions prevailing in different neighbourhoods, and to suggest alterations, until some really practical scheme is arrived at. At present the inspectors are the reasons why teachers, often exceedingly capable and intelligent, often full of initiative and interest in their schools, relapse into a dull programme of routine work, because their desire to make the time-table more suitable and more interesting to their classes is not understood, or is misunderstood by the inspectors.

The inspectors themselves—in London, at any rate—are over-inspected, and each has so many schools to get through in the year that if he were to spend time trying to understand the different points of view of the school teachers he would never get round. He also, perhaps, has the fear of being hauled over the coals by his superior officer, for subinspectors do much of the actual work of inspection, while the inspectors spend much time in office work. In London there are 24 school inspectors and subinspectors under the London County Council; 22 of these are men and 2 are women. The staff of school inspectors appointed by the Board of Education for England and Wales numbers nearly 250, of whom over 150 are subinspectors. They are almost all men. These gentlemen, both those appointed by the Board of Education and those appointed by the London County Council, base their reports on the schools on a particular standard of excellence to be attained by the children in such subjects as reading, writing, drawing, and needlework. A child who does not come up to the standard gets a black mark, and the teacher whose class does not produce results which satisfy the inspectors likewise gets a bad report. It does not matter how the children's eyes and brains are strained and forced in the attempt; nothing matters but the net result in fine stitches and pen-strokes. We all know that some children can never sew or write neatly, however good they may be at other lessons, but such idiosyncrasies are not taken into consideration. Indeed, the injury to eyesight has been so great in the past that such pressure is now forbidden in the infants' departments; there is, however, far too much work done for show purposes at the expense of practical and sensible instruction. Here and there a progressive head teacher allows the girls to mend their clothes in school, but this can only be done outside the time set apart for specimen sewing. Could any other results be possible when men are appointed to posts which necessitate the inspection of needlework? The women teachers who are content to carry out their duties to the letter—and naturally they are in the majority—openly say that they prefer men inspectors to women because, provided they can force these mechanical results out of the pupils, they satisfy the inspectors. On the other hand, those teachers who have the practical training and real welfare of their pupils at heart, and do not wish to sacrifice their sight to the accomplishment of very fine work the uselessness of which is only too obvious, incur the displeasure of the inspectors. In this respect the teachers have a real grievance; the reports made by the inspectors on the teachers are confidential, and as the latter never see what has been said of them there is always a risk of injustice to teachers who may have definite views on the subject of education which, however reasonable, may clash with the personal views of the inspector.

In justice to the ratepayer, to the teacher, and to the elementary school child, the present system of selecting school inspectors should be reformed. The appointment should cease to be a mere piece of patronage extended to men who have taken what is called a good degree, and have influential friends. Candidates should be required to produce evidence that they have studied the art of teaching theoretically, and have had practical experience of the work in elementary schools. In Bulgaria, where a very complete and efficient system of State education has been established, the inspectors are chosen from among former professors of high schools who have had a university education, and have distinguished themselves by their contributions to pedagogical literature, and from among the teachers in primary schools who have taught for at least five years, and have passed the examination for the post of inspector. Similar regulations are greatly needed in this country, and would work a very salutary reform.

LITERARY NOTES.

Among other interesting articles in the current number of the *Cornhill Magazine* is one by the Dean of Canterbury on the famous editor of the *Times*, John Thadeus Delane. Dr. Wace, who was one of his most trusted contributors, tells that Delane in training himself for the profession of a journalist, was not only called to the Bar, but "attended the hospitals for some terms." Delane was always fond of medical and surgical knowledge, and he more than once mentioned to Dr. Wace his experience in Paris under Magendie. To the general knowledge thus acquired, Delane owed much as an editor. Almost alone among newspapers, the *Times* has, as a rule, not only dealt intelligently with medical matters, but has been careful to exclude from its columns the sensational rubbish about supposed new discoveries and mythical triumphs of the healing art with which the most "enterprising" of its contemporaries seem to take a pleasure in misleading their readers. *Quidquid Graecia mendax audet in historia* would seem to be prophetic of the irresponsible manner in which certain halfpenny papers of the present day deal with everything relating to medicine.

In a note contributed to the *Progrès Médical* of December 26th, Dr. Cornet deals with the food of the Gauls. Among the early Gauls, as among the Germans, he says, the dietary consisted largely of milk and the produce of the chase, such as boars, reindeers, aurochs, etc. Even human flesh was eaten, probably when animal food was scarce. Little is known about Gaul before Caesar's day. Varro speaks highly of their ham and their sausages. The Gauls loved boiled meat, and boiled oats or porridge formed an important part of their diet. According to Cornet bread was made by the Phocoeans or early inhabitants of Marseilles nearly seven centuries before Christ. Leavened bread, however, did not come into use before the time of the Roman dominion, and then only among rich folk. In the Frankish period the baker's shop began to take the place of family baking, especially in towns. The early Gauls, at least those in the interior, did not know

wine; the beverages in use were beer and hydromel. Both these drinks were known to other peoples by other names from the most remote antiquity. In the year 365 after the foundation of Rome, according to Pliny, an enterprising Etruscan trader introduced wine which pleased the Gauls so much that they forthwith determined to raid the country from which the delicious drink was produced. This led to the invasion of that part of Italy which the Romans called Transpaduan Gaul. Before the Roman conquest the Gauls, like the Scythians, Scandinavians, and other savage peoples, drank out of human skulls. After the Roman conquest they became more civilized in their manners, and their diet became gradually modified.

We learn from the *British Esperantist* for January that between August 5th and November 5th, 1908, 18 new Esperanto societies were founded in America—17 in the United States and 1 in Mexico. On the latter date there were 39 Esperanto societies in thirty-nine American towns. In Europe 63 new societies were formed, the principal new additions being 22 in Germany and 5 in Italy. The total number of European societies was 295. The total recorded number of Esperanto societies throughout the world on November 5th was 1,130. The total number of Esperanto magazines was 69. Esperanto has received official recognition in various countries. Thus in Austria-Hungary the Minister for War has given permission to officers and military officials to join the Esperanto Union in Vienna. In France the Departmental Council of the Seine has voted a subvention to the Esperanto Group at Charenton, which also received two further subventions from the municipalities of Charenton and Saint-Maurice. In Cochin China the Colonial Council has voted a subvention of £20 to the Esperantist Group at Saigon. The use of Esperanto in telegrams was sanctioned in Russia in 1904.

Medical News.

THE late Professor Sacharjin has left two millions of roubles for the erection of a hospital in Moscow.

THE annual dinner of the West London Medico-Chirurgical Society will take place at the Great Central Hotel, Marylebone, on Friday, February 12th.

A NUMBER of medical officers of the Turkish army have been sent by the Ottoman Government to go through courses of study in German and French universities.

A PAPER on the purification of water by ozone and other chemical substances will be read by Dr. S. Rideal at a meeting of the Royal Sanitary Institute, at the Parkes Museum, on Wednesday next at 8 p.m.

PROFESSOR ROBERT KOCH has been elected a President of the German Central Committee for the Prevention of Tuberculosis, in the room of its founder, the late Herr Friedrich Althoff, Ministerial Director of the Prussian Education Office.

THE usual course of lectures and demonstrations at the Hospital for Sick Children, Great Ormond Street, W.C., will commence on Thursday next, when Mr. Arbuthnot Lane will give a lecture on fractures in children, at 4 p.m. The lectures are free to qualified medical practitioners.

THE second lecture of the Hunterian Society is to be delivered by Mr. Bland-Sutton at the London Institution, Finsbury Circus, next Wednesday evening. He will deal with thrombosis and embolism after operations on the female pelvic organs. The lecture is free to all members of the medical profession.

THE second international course of legal psychology and psychiatry at the University of Giessen will be held from April 13th to 18th, 1909, under the direction of Professor Sommer, with the co-operation of Professors Mittermaier and Dannemann of Giessen and Professor Aschaffenburg of Cologne. Further information can be obtained from Dr. Sommer, Professor of Psychiatry, University of Giessen.

A PROVINCIAL sessional meeting of the Royal Sanitary Institute will be held at Manchester on Friday, January 22nd, when, at 2.30 p.m., a visit will be paid to the new Manchester Royal Infirmary. At 7 p.m. a discussion on the infirmary from the hygienic, sanitary, and aesthetic points of view will be opened by the architects, Mr. Edwin T. Hall and Mr. John Brooke.

THE Clinical Society of Newcastle-on-Tyne will entertain Sir Thomas Oliver at its annual dinner on January 14th, in order to congratulate him upon the honour of knighthood recently conferred upon him. On the afternoon of the same day Sir Thomas Oliver will give an address to the society on the use of caissons in bridge building, with remarks upon the physiology and pathology of compressed-air illness.

THE constitution of the King Edward VII's Hospital for Officers, Grosvenor Gardens, S.W., has been altered. There is no longer an honorary medical staff, as the appointments were for five years only. Patients may now be treated by any member of the surgical staff of a London hospital, and, prior to admission, an officer should select his surgeon and arrange with him as to fees. The hospital is for surgical cases only, and will be maintained as a free nursing home.

THE German Urological Society will hold its second congress at Berlin, April 18th to 22nd, 1909. Among the subjects to be discussed are urology and gynaecology, suppurative non-tuberculous affections of the kidneys, and tumours of the bladder. An exhibition will be held in connexion with the congress. All communications relative to the congress should be addressed to Sanitätsrat Dr. Wossidlo, Victoriastrasse 19, Berlin, W.

DR. JAMES KERR, Chief Medical Officer of the London Education Committee, will deliver the first of a course of lectures and demonstrations on the medical inspection of school children at the rooms of the Society of Medical Officers of Health, 1, Upper Montague Street, London, W.C., on Monday next, when the chair will be taken by Dr. Charles Newman at 3 p.m. The lecture will deal with the general principles of medical inspection and with annual reports. An exhibition of appliances and material relating to medical inspection is being organized. Full particulars can be obtained from the secretary of the society at the address mentioned.

THE Lord Chancellor has placed on the Commission of the Peace for the County of London the name of Surgeon-General Sir Charles Cuffe, K.C.B., Army Medical Staff (retired). Sir Charles Cuffe is a member of the Naval and Military Committee of the British Medical Association, and Vice-Chairman of Council of the Kensington Division, Metropolitan Counties Branch, President for 1908-9 of the Irish Medical Schools' and Graduates' Association. He serves on various boards of management of industrial and other certified Poor-law schools, is a Poor-law guardian of Kensington, and a member of the Council of the Royal Borough of Kensington, which he has represented since November last on the Joint Subcommittee for Kensington and Westminster of the London County Council for investigating the claims under the Old Age Pensions Act, 1908.

MR. C. F. P. CAVE has reported to the Royal Meteorological Society the results of a number of experiments with kites and balloons arranged by the International Commission for Scientific Aeronautics, with the object of determining the state of the atmosphere as regards temperature and wind velocity at great elevations. The average height reached by the balloons was 10.2 miles, the greatest 14.2 miles. Some of the resulting thermographs showed considerable differences between the up and down tracings, and this was deemed to indicate that fairly rapid fluctuations of temperature may occur in the upper air. Other tentative conclusions put forward were that after a certain height is reached there is no longer a fall of temperature with increase of height. Above a certain altitude there may even be an increase of temperature which cannot be explained by solar radiation, for some of the balloons recording such rise reached their highest point after sunset. At the lower limit of the isothermal layer it would appear that there is a well-marked diminution of wind velocity.

THE distribution meeting of the Hospital Saturday Fund for London was held on January 2nd, £25,000 being divided among the various applicants. The ordinary receipts for the year amounted, it was shown, to £22,659, an increase of some £1,600 as compared with the previous twelve months. It was reported that during the year 1,556 letters of recommendation for convalescent homes had been issued, rather more than two-thirds of these being for admission on the part-payment system. During the previous three months 61 patients had been admitted to the beds endowed by the Fund in various consumption hospitals and sanatoriums, while 41 patients had been admitted to the Brompton Consumption Hospital on the recommendation of the Fund during the year. In the surgical appliance department the attendances of patients reached 8,026, the payments made by them exceeding £1,173. In its report the Distribution Committee drew attention to the fact that the waiting list at various institutions intended for the consumptive continued to be most unfortunately long, and put forward a suggestion that the Fund should endow a greater number of beds in those on which the demands were greatest.

British Medical Journal.

SATURDAY, JANUARY 9TH, 1909.

MEDICAL INSPECTION AND SCHOOL CLINICS.

THE British constitution, of which we are all so proud, exists, it is said, only in the mind of the Speaker of the House of Commons, who, whenever the machinery begins to creak too audibly, evolves from his inner consciousness a new clause. Certain it is that as a people we have no love for a complete, logical, comprehensive scheme. The Abbé Sièyes, that ingenious framer of complete, logical constitutions, would not have had a day's shrift with us. We have taken to heart the injunction to do that which our hand findeth to do to-day and to leave to-morrow to look after itself. We sympathize with Sir Boyle Roche's rhetorical question, What has posterity done for us that we should do so much for it? We do not cross any bridges until we come to them, but sometimes the bridge proves to be round the next corner, and with much screeching of brakes and blowing of horns we are pulled up to see whether it is wide enough and strong enough for our car to pass. These, perhaps trivial, reflections are inspired by the present attitude of the public, or at least of the ratepayers, towards the great question of the health of school children.

The public conscience demanded medical inspection of school children, and Parliament, in making that measure compulsory, added a permission to local authorities to make arrangements, with the sanction of the Board of Education, for attending to the health and physical condition of children educated in public elementary schools. It provided, also, that the local education authority might encourage and assist the establishment or continuance of voluntary agencies and associate with itself representatives of voluntary associations for the purpose. Medical inspection, as was expected, has disclosed the fact that a large percentage of children in elementary schools need medical treatment; nobody doubts that it must be provided for them in some way, and the ratepayer is lamenting the possibility—nay, the certainty—that it will cost money, and is seeking a compromise.

The matter has been brought to a sort of crisis in London by the report of the special committee to the Education Committee, which was published in the JOURNAL of December 26th, 1908, and is further dealt with in an article this week at page 96. The same problem, on a proportionately smaller scale, is confronting other local authorities throughout Great Britain, and it may be well to examine some of its features, taking London as the most recent and, owing to its size, the most striking example.

It seems clear that the medical attendance and treatment required must be given by private practitioners, by existing voluntary hospitals and dispensaries, by provident dispensaries and societies, or under the Poor Law, unless the education authority itself institutes a system of school clinics. The map of London printed in this issue (pp. 100–101) shows in a striking way that the voluntary medical institutions, even if they were prepared to undertake the task of caring for school children or if it were politic that they should make the attempt, are not so placed topographically as to render success possible. The work will have to be done locally, and ought naturally to fall to the lot of the members of the medical profession practising in each locality. The Annual Representative Meeting last year adopted a resolution to the effect that the services of the profession should not be given gratuitously to patients who are maintained by public funds, and it appears now to be universally recognized that the treatment of school children in school clinics or elsewhere must be paid for, and though this ought to be a truism, yet in these days it is something gained to have the principle clearly admitted.

The general practitioners of London could without doubt do the whole of what has to be done if they were afforded adequate nursing assistance in certain classes of cases—ringworm and sore heads, for example—and with opportunities for reference and consultation in special cases. Certain classes of cases, such as errors of refraction, would be referred for treatment; while the result of consultation would be provision by charitable or municipal action for chronic debility or illness; children suffering from, or suspected of, internal tuberculosis, for example, would be sent to country schools or sanatoriums.

It seems clear either that the general practitioners must do this work, the greater part of which they already do so far as it is done, or that their field of practice must be seriously diminished. The number of children to be examined and treated will undoubtedly be large, and the administrator's difficulties begin when the question of the organization of the work and the remuneration of those who do it are considered. If we leave out of consideration skilled artisans earning high wages, who as a class appear willing to make provident provision for sickness, there would seem to be only two possible ways in which the work [can be] remunerated—by a great extension of the provident dispensaries and clubs, or by the municipality.

Now it is a fact that the provident principle has made relatively little headway among that very large class of the working population, larger perhaps in London than in any other city in the country, which earns small weekly wages or exists by casual labour. London is a great port and dépôt of merchandise, and the number of men engaged in handling goods and carting them from one place to another is enormous. The labour is unskilled and very badly paid in relation to the cost of housing, which is probably the most reliable standard of comparison. A certain proportion—we believe a large proportion—of this class does make some provident provision for maintenance during illness of the breadwinner, but does not usually go beyond this, and many do not do so much.

It is easy to say that all ought to make provision; but they do not, and it would seem that the medical profession, as a body of practical men, must either ask the State to insist on compulsory providence, or find some other way of providing medical aid to them and their families in sickness.

Mr. Warren, the representative of the Metropolitan Provident Medical Association, in his evidence reproduced at page 97, stated that there were 38 provident dispensaries in London, that there were about 110,000 persons enrolled as provident members of these institutions, and that of this number some 50,000 were children. As there are probably about 700,000 children of school age in London, it is not too much to say that

the provident dispensary system has, so far, only touched the fringe of the matter. Mr. Hancock Nunn, who also gave evidence (p. 97), expressed the opinion that the juvenile benefit societies could be so extended as to meet the difficulty, but neither of these gentlemen seems really to have thought the matter out, and both admitted that the provident organizations would have to be subsidized by the London County Council if they undertook the work. From whatever side we approach the question, therefore, it seems clear that State aid in some form must be given.

A great deal is expected from the report of the Royal Commission on the Poor Laws, but a Royal Commission cannot alter economic conditions; it can only point to means by which their evil consequences may be prevented or diminished. Short of recommending a scheme of universal compulsory sick assurance on the German plan, it is difficult to see what it can propose except an extension of the non-contributory State system of aid in incapacity and old age which has been developing in this country during the present generation. The acceptance of medical relief does not deprive the recipient of civic rights. The Poor-law infirmaries have been converted into well-equipped institutions precisely analogous, except in respect of the medical staff—undoubtedly an important exception from certain points of view—to the great hospitals of Paris or Berlin. Old age pensions have superseded the instruction of the Local Government Board's circular of 1900, "that aged deserving persons should not be urged to "enter the workhouse at all unless there is some "cause which renders such a course necessary, such "as infirmity of mind or body, the absence of home "accommodation or of a suitable person to care for "them, or some similar cause, but that they should be "relieved by having adequate outdoor relief granted "to them"; and lastly, as a matter of fact, more than half the total expenditure made out of the poor rates is for purposes altogether unrelated to the relief of the poor; so that if the Poor-law system were abolished to-morrow, the work it does, or by far the greater part of it, would have to be continued under another name.

We have in this country drifted with the tide, not knowing exactly whither we were going, while the German mail boat has gone by us on the steady course laid down by the great pilot Bismarck. But the experience of the medical profession in Germany should be quite sufficient to teach the profession in this country—if indeed it still needs the lesson—that the State will not go out of its way to deal generously with doctors. It has this, at least, in common with Providence, that it is disposed to help those who help themselves, and in the readjustments which are being made, and the many others which will without question have to be made within the next few years, it behoves the medical profession to look after its own interests. But it is essential that the questions should be approached in a statesmanlike spirit, and with a disposition to adapt the medical system to changing social and economic conditions. The State is committed to the policy of providing medical relief, not only for the legal pauper and for the small wage-earning and casual labour classes, but also to giving or procuring proper care for sick or defective children of school age. We cannot see any escape from the conclusion of the Special Subcommittee that, though existing provision of private and hospital practice, to which we may add the Poor-law infirmaries, sufficiently meets the requirements in the case of children requiring operative and in-patient treatment, other provision must be made for medical treatment of the very large mass of cases of physical deficiencies, including defects of the eyes, ears, and teeth, which are being disclosed by medical inspection.

The State, as has been said, is committed to the principle that the children are to be cared for; it will have to find the money necessary to fill up the large gaps left by the voluntary system, and though local authorities are shying at the suggestion that an additional charge must be put on the rates, it is morally certain that the money will be forthcoming.

A report by the Medico-Political Committee of the British Medical Association on certain points connected with the medical inspection of school children, and the treatment of those found to be defective, has recently been referred to the Divisions, with a request for an expression of opinion on a series of questions dealing with both aspects of the subject. One of these questions asks for the view of the Division as to the distribution and method of selection of the staff of school clinics should their establishment be proposed and the mode and rate of remuneration; another asks for suggestions as to the methods of ensuring that parents who can afford to pay for the treatment of their children when found to be defective as the result of medical inspection should be compelled to do so.

SPIRITUAL HEALING.

IN the JOURNAL of April 30th, 1907, p. 951, and again in that of November 21st, 1908, p. 1579, we discussed an interesting movement for "the moral treatment of "nervous disorders" which was recently started in America, and may, for convenience, be referred to by the title of the Emmanuel treatment, from the name of the church in Boston where it seems to have had its origin. In a further article, entitled Ministries of Healing, which appeared in our issue of November 28th, 1908, p. 1634, we gave an account of debates on spiritual healing at the Pan-Anglican Congress and the Lambeth Conference held last summer. It was further stated that an association, called the Church and Medical Union, had been formed, with the object of promoting the co-operation of the Church and the medical profession in the healing of the sick. The principles on which the union professes to carry on its work are those embodied in the report of the Lambeth Committee, which were summarized in that article. Our readers have therefore had ample opportunities of learning the objects of the movement and the methods by which they are to be attained. The secretary of the union is Mr. Geoffrey Rhodes, and its head quarters are at Dryden House, 43, Gerrard Street, London, W. The objects of the union are stated to be (1) to establish head quarters in London where books and literature may be consulted, and where persons may come for advice and information; (2) to canvass the clergy and medical men generally all over Great Britain with a view to obtaining their co-operation; (3) by means of literature, lectures, and meetings, to obtain support for the union and the objects for which it has been formed; (4) to recommend courses of reading, as samples of which may be mentioned *Mental Healing*, by the Bishop of Bloemfontein; *Christian Science and "Spiritual Healing,"* by Prebendary Yorke Fausset, both published by the Society for the Propagation of Christian Know-

ledge; and *Religion and Medicine*, by Worcester, McComb, and Coriat (reviewed in the JOURNAL of November 21st, 1908), and *The Healing Ministry of the Church*, by the Rev. Dr. S. McComb; these two works are published in this country by Messrs. Kegan Paul, Trench, Trubner and Co., Limited, whose offices, by a convenient coincidence, are at the same address as the head quarters of the Church and Medical Union. A short time ago interviews with Mr. Rhodes appeared in various newspapers. To a representative of the *Daily Mail* he is reported to have said:

"Men and women will be in attendance at our "head quarters to interview the patients, who will "be asked to give a certificate from the doctor who "is attending the case. Then we will arrange for "the patient to be seen by a clergyman—if possible "by his parish priest. The clergyman of the future "will have to study psychology, and it is our intention "to have lectures and classes on mental therapeutics, "where the clergy will learn how they can help those "who need their aid."[1]

How they are to apply their knowledge of "mental "therapeutics" when acquired we are not told; nor do we know how far the union has advanced in the realization of its objects. We have seen none of the literature which the union is to make it its business to issue; nor have we seen any accounts of lectures and meetings in its support. What is still more important, we have seen no report of cases treated or of the results obtained. We confess we feel some curiosity as to the exact position of the union, and we should like to know how many members it has so far enrolled. It would also be interesting to know something definite about Mr. Rhodes's special qualifications for the task—useful in itself, but needing for its successful performance, in addition to enthusiasm, wide knowledge and infinite tact—he has undertaken. Till satisfactory information on these points is forthcoming, the medical profession, however much individual members thereof may sympathize with its objects, will be well advised not to give any active support to the union.

Another professor of spiritual healing, who took part in a meeting held at Sion College on November 16th, with the object of promoting the formation of a Central Church Council in the diocese of London for the consideration of questions connected with healing by spiritual means, is Mr. James Moore Hickson, described as of the Society of Emmanuel. He is reported to have said on that occasion that the society was formed more than three years before with the object of reviving in the Church the gift of healing. The members of the society, he said, acted through prayers, the laying on of hands, and, when requested by a patient, anointing, which was performed by a priest. He added that they were in sympathy with all kinds of healing, which they considered to be a gift of God, but they wished for a more spiritual atmosphere round a patient. The Emmanuel Society, it is to be inferred, exists to supply this want. From a little magazine[2] published by Mr. Hickson we learn that he is the President, Lady Mosley the Honorary Treasurer, and the Rev. Charles Mylne the Chaplain of the society. The following are stated to be its objects: "(1) To "develop the Divine gifts left to His Church by the "Master, especially the gift of healing by prayer and "laying on of hands, with the object of using these "divine gifts, not only for the healing of the body, but "as a means of drawing the souls of men nearer to "God. (2) To further this purpose by opening a hostel, "especially for poor gentlefolks, a class who are "beyond the reach of ordinary help where their cases "may be diagnosed by duly qualified medical men, and "where a band of healers may develop and use their "gifts to further the work. (3) To form a strong wall "of defence against the powers of evil, by mutual "united intercession, and by common reception of "the Holy Communion on the Second Sunday in the "month. (4) To safeguard the central doctrine of "the Incarnation, all regular members should acknowledge the divinity of our Lord *although the operations of the Society should be freely used for all in need of them.*" From a paper by the Rev. George P. Trevelyan published in the first number we learn that the society does not concern itself about every kind of spiritual healing: "That term is used to include "healing by mental suggestion and also healing by "prayer, apart from a special gift of healing in the "person who prays for the sufferer." In a paper which appears in the third number the Right Rev Bishop Mylne, D.D., says, "In the latest up-to-date "book on cancer, which is in the hands of the most "scientific men of to-day, there is a case quoted which "is, I have no doubt, correctly said to be a unique one "of *abortive* cancer. The case is fully described from "a medical point of view—how a patient, stricken "unquestionably with cancer, was found to have in "place of the tumour, located and verified by several "experts, something which could only be called "an abortive cancer, the like of which was "never heard of before. I happen to know the whole "history of the case from the brother of the patient, "himself a medical man. It was this: The patient "had been suffering from a serious affection of the "throat. He went to one specialist after another "Three eminent men told him without hesitation that "he was suffering from a cancer growing on the vocal "cords, and that nothing but their total excision "would save his life. He was a hard-working priest "of our church, and of course the operation meant "that he would never utter a word again. However, "his life had to be saved. The doctors came; the "throat was laid open; the operator had the knife in "his hand to excise the vocal cords. He stopped "dead. Instead of applying the blade of the knife, he "took hold, between his thumb and the handle, of all "that he found there, and peeled it off like the skin "of a fruit. Between the diagnosis and the operation "the patient had been anointed with oil in the name "of the Lord. That is one of not a few cases which "some of us know about, but it is by far the best "defined one I know of, and one that is actually "celebrated in medical circles; not, of course, being "quoted as an instance of what may be done by "anointing, but as a case unique in surgical experience." We should be glad to have fuller particulars of this unique case, and for that purpose we respectfully invite Bishop Mylne to furnish us with the name of the "latest up-to-date book on cancer" from which he quotes.

The variety of cases with which the Society of Emmanuel deals may be gathered from the list of patients for whom prayers are asked. The diseases include blindness, "internal weakness" (which seems to be so common among members of the society that we are tempted to suspect that the seat of the affection is the brain), internal growths, consumption, and deafness. There are several cases of insomnia, and we are willing to believe that a perusal of *The Healer*

[1] *Daily Mail*, November 21st, 1908.

[2] *The Healer*. Printed for the Publisher, J. M. Hickson, Esq., 22, Talbot Square, W., by Roberts and Leete, Limited, Bermondsey Street, London, S.E.

would be a valuable remedy for that ailment. Reports of cases of cure of "cancer in bowel," rupture, locomotor ataxy, and colitis are given in the style adopted by the advertisers of quack medicines, but without any clue by which the patient can be traced.

In another number there is a report of a conference of spiritual healers held at Pinner in July last, and it is stated that among those present were the Bishop of Dorking, the Duchess of Bedford, Lord Radstock, Lord Sandwich, and Miss Reed, M.D. We do not call in question the good faith of any of these persons, but we confess we should like to know something more about Mr. James Moore Hickson, who appears to be the moving spirit of the Society of Emmanuel. In *Truth* of November 25th, he is described as a gentleman who probably at one time devoted his energies to massage. Now it would appear he heals by prayer. We are quite open to conviction in respect of the efficacy of his treatment if he will furnish facts on which a judgement can be founded. The art of healing, whether by carnal or by spiritual means, is full of fallacies, and it is a pity that, like so many healers, Mr. Hickson gives no particulars by which the nature of the disease and the genuineness of the cure can be established. Nor is it stated whether the "healing" is done gratuitously.

We have seen that a Miss Reed, M.D., was present at the conference to which reference has just been made. This lady, whose full name is Eleanor M. Reed, and who describes herself somewhat vaguely as "M.D. (U.S.A.)," also took part in the proceedings of the Pan-Anglican Congress, where she oracularly declared that "the real principle of healing was "intellectual and physical co-operation with the vital "powers within the organism itself." She added, as if she were announcing a new discovery, that "they "needed to realize that the body responded to "emotional states, whether there was truth or error "behind the emotions; and, given the mental state, "they were sure to get the physical results." Although she criticized Christian Science, she said its theories and practices tended "to give poise to "the controlling power of mind." We do not gather very clearly what Miss Reed's own method of treatment is, unless it is to be found in the following eloquent but rather cryptic sentence: "Are we not so busy in "criticizing the Church that we have no time to study "the beauty of the Christian mind, the fruit of her "labour—a mind, hallowed by adoration, illumined by "faith, empowered by grace, sweetened by divine love "—such is the realm in which she bids us look for the "armour of our physical salvation?"

We do not know how far these various representatives of spiritual healing agree with each other; we think it not unlikely that they hate each other with the fervour which is generally proportionate to the intensity of theological belief. If all or any of them can show that they have discovered a new force, or a new method of applying one already known, to the cure of disease, rational medicine will welcome a new weapon. As we have often said, the wise physician understands the action of the mind or the spirit on the body, and uses it for the benefit of his patient. A man who firmly believes in his doctor's skill, or in the efficacy of the treatment to which he is subjected, is in the best possible condition for the operation of curative forces. On the other hand, a patient who believes that nothing can cure him helps to seal his own doom. Avicenna well said, *Plus interdum prodesse fiduciam in medicum quam ipsam medicinam.* The "lady of the highest "rank," who is reported to have said that she would rather die under the care of Sir Henry Halford than recover under that of any other physician, must have been a living tribute to his skill.

The fact cannot be too much insisted upon that there is nothing in the least new about faith healing. It is as old as medicine and religion, which in the beginning were one, as they still are among many savage tribes. Faith can move mountains, and it matters little on what it is based or how it is excited. As John Hunter has told us, the touch of a dead man's hand has charmed away a tumour. But there are limits to its action, and while willing to accept faith as an adjuvant, no one who knows anything about disease will admit that by itself it can heal any but ailments the origin of which lies hid in the unknown recesses of the nervous system. By all means let us know the full power of the spirit over the body. Only let us have facts that can be fairly and fully tested. A scientifically trained doctor takes nothing on trust, and there can be no useful co-operation between medicine and spiritual healing unless the facts of each case are fully disclosed. That is the point where science and faith part company; the former is as importunate as Arthur Clennam at the Circumlocution Office, and the wonder workers are as painfully surprised at this as the youthful Barnacle was at the persistence of "the fella that wanted to "know, you know."

PURIN-FREE DIETARIES.

IT is generally admitted that the metabolism of purin bodies is a complex process, and that our knowledge of it is far from complete. We know, however, that the purins of animal tissues are derived from the metabolism of cell substances, and are constantly being excreted by the usual paths. When a minimal quantity of these substances is taken in the food, it is permissible to infer that the amount of purin excreted represents the extent of the cell metabolism of the body tissues. As a matter of fact, recent investigations tend to show, other things being equal, that the largest amount of purin is excreted when the standard of health and activity is at its highest, but it has to be remembered that the relation of the amount of excreted purin to that actually formed by the cells of the body is still unknown. The assumption that the purins produced by the cells undergo the same metabolic changes as those purins which are introduced into the body with the food has become current—but after all it is only an assumption. There is much more work to be done before dogmatic statements may be accepted upon this aspect of the subject.

From the investigations of Leathes and his coworkers it appears that there is a tide in the excretion of purins (uric acid and purin bases) which is at flood in the early hours of the day, and ebbs towards the night, while the output of urea is lowest in the early hours of the day and highest after the last meal. The purin output, therefore, is not related to the amount which is being dealt with at the moment, and can only be ascribed to some functional activity connected with the general metabolism. The variations in this activity probably account for the variations in the purin output of the healthy individual when taking a purin-free diet. That these apparent irregularities of output are not due to retention of uric acid and purin bases has now been definitely shown, and it is generally accepted that when the purins are extruded from the cells they are rapidly removed from the body.

When we consider the metabolism of food purins we find that a fraction of the ingested purins rapidly appears in the urine; the remainder cannot be accounted for in detail. Certain foods yield more, others less, urinary purin. The fractional output varies in different individuals, and in the same individual under different conditions. Much has been made of the toxicity of the food purins, and there is some experimental evidence to support the contention, but it is probable that under ordinary conditions uric acid and the purin bases are almost non-toxic. It has to be admitted, however, that it is quite possible for purin bodies to combine with imperfect metabolites so as to form an irritant compound.

In local or general disease the nucleus of the cell bears the chief brunt of the action of bacterial or chemical poisons, and we naturally expect to find that certain infective or toxic conditions are associated with an increased functional activity of nuclear tissues, and, consequently, with an augmented purin output. What we so expect we certainly find, and it is also clear that this output is quite apart from an increased intake, that it is not due to a washing out of previously retained purin, and that, as a rule, it reflects rather than affects the progress of the disease.

There are, however, a few individuals whose cells do not tolerate well an excess of purins in the tissue fluids—either of exogenous or endogenous origin—and this intolerance is manifested by certain functional disturbances. In these cases the temporary withdrawal of purin material is followed by a cessation of the symptoms. This diminution of purin intake is complicated by the fact that it is almost invariably associated with a decreased amount of protein, and consequently with a decrease of any unknown thermostable substances present in the food which may possess irritant properties. On a purin-free diet, therefore, the patient absorbs less nutriment, and as such patients are generally of the hypersensitive type, the idea of eating a small amount of food may become a "fetish," and so tend permanently to lower the resistance of the tissues to toxins and cancer-cell growths. Among vegetarians a "uric acid free diet" was once advocated, but it is now recognized that such a diet contains too little protein, and an adequate intake of nitrogenous material is rightly insisted upon.

Assuming, therefore, that a strictly purin-free diet is a reduced diet and only a temporary necessity, we may proceed to construct suitable dietaries, and also to detail the foods which may be permitted during a transition period which may suitably precede the resumption of a low average protein dietary.

For experiments in metabolism it is necessary to determine the exact amount of calories and nitrogen yielded by the food consumed. In everyday life, however, this is not practicable. While the patient will readily learn what may or may not be eaten, he rarely carries out instructions as to quantities. The physician, therefore, has to control the intake by keeping a record of the body weight, and by examination of the urea or total nitrogen, acetone, etc., at regular intervals. The urine must also be repeatedly tested for sugars, as there are certain families whose members exhibit glycosuria when the carbohydrates and vegetable proteins are increased.

Speaking generally, the foods which contain little or no protein should be the first to be discarded and the last to be resumed. Unfortunately, however, these are the foods which provide the pleasurable and stimulating effects of eating. It is thus an advantage not to change the dietary too abruptly, and for a fortnight or so the patient should be advised to restrict slightly the amount of food taken and to eat fish or meat once a day. With regard to drink, not more than two small cups of tea or coffee or chocolate should be taken daily. Soups, beer, ale, and porter ought to be avoided, but claret, Burgundy, hock, whisky, or gin may be substituted when there are no conscientious objections to them. For total abstainers quassia or other bitters are useful, but fermented temperance drinks are not well tolerated. Condiments may be permitted unless renal conditions contraindicate their use.

After this probationary period the "purin-free" diet may be prescribed. The term "purin-free" is, however, a misnomer. A precisely "purin-free" diet would be composed of milk, eggs, white bread, cheese, butter, and a few vegetables; but when the milk contains many cells, as it often does, and the eggs are not absolutely fresh, as they often are not, their purin content comes within the range of our present chemical methods. Because a food is poor in purin we have assumed in the past—and probably we have erred in doing so—that it could not disturb the general purin metabolism; we have yet to learn whether this is so or not. We are really dealing, therefore, with a dietary which is designedly poor in purin. For this purpose the following foods are at our disposal: Milk—fresh, soured, buttermilk, or whey; eggs—boiled, poached, scrambled, or raw; white (not brown) bread and butter; macaroni and cheese, rice, tapioca, semolina, and vermicelli. Suet may be used for puddings of all kinds, such as currant or jam roll, treacle, apple dumpling, etc. Pastries, pancakes, jellies, and the usual tea cakes are also available. All vegetables, except the pulses (peas, beans, and lentils) are poor in purin. Practically all fruits may be permitted. As to drinks, tea, coffee, or cocoa are excluded, and hot water, claret, or burgundy, mineral waters, or hot milk may be substituted. Beer and porter should be discontinued, and alcohol diminished as far as the usual habits make possible. Condiments are generally craved for, and there is nothing to be gained by withholding them unless they are otherwise contraindicated.

After a month or so of this diet a return to the usual form of human food should be attempted. Brown bread, oatmeal, wholemeal, beans, peas, nuts, asparagus, or mushrooms may be gradually added. If it is desired to employ vegetable protein only, then these latter foods should play a large part in the dietary. When animal protein is preferred, sweetbread should be the first kind of meat allowed, since the purins contained in sweetbread are "bound purins," and are badly absorbed, the greater proportion passing out in the faeces. Later, codfish, sole, plaice, mutton, chicken may be permitted, salmon, halibut, and beef and pork being reserved for later periods. When meats are again taken they should be stewed, not roasted, and milk sauce substituted for the meat gravies.

Even when a return to full diet is made it is well to restrict tea, coffee, and cocoa, and to limit soups. With regard to extracts, there is little to choose between any of the obtainable preparations. The purins of yeast extracts are less well absorbed than those of meat extracts, and theoretically are less harmful, but the differences are exceedingly slight.

It will be evident that the prescription of a diet poor in purin calls for careful observation on the part of

the physician. The danger signals of starvation, of glycosuria, and of mental bias, should always have attention, and a return to the average dietary should be the object aimed at. Much information may be gained by the daily determination of the total purin output by clinical methods, but when this is impossible the weight and general condition of the patient may afford useful information. A probable result of the treatment will be a diminution of the amount of protein consumed, but the quantity of food necessary for the maintenance of life and for the provision of latent resistance to disease varies with every individual, and with the same individual at different periods of life, so that it is well to realize that rigid prescriptions and rules as to food are but rarely applicable, and that the percentage of good results from the use of a diet poor in purin depends largely upon the sagacity of the physician, and even then is not so high as the enthusiast suggests.

HONG KONG AND CHINA BRANCH.

IN the SUPPLEMENT of this week we publish the official report of the annual meeting of the Hong Kong and China Branch. The report of the honorary secretary and treasurer, Dr. J. Herbert Sanders, shows that the Branch is in a flourishing condition. It has now 130 members, and extends throughout districts right into the far western portion of China. It will be noted that a library with reading room has been established for the use both of members resident in Hong Kong and of those who may be passing through the town; it will also be available for naval surgeons on the station. The library, which contains the latest standard books of reference, cannot fail to be of the greatest service to members. Men practising in distant colonies have many opportunities of adding to knowledge, but they are often handicapped by the want of books of reference. We therefore congratulate the Hong Kong and China Branch on the manner in which the members have chosen to use the grant made to the Branch by the parent Association. The greatest credit is due to the officers, and especially to Dr. Sanders, for the energy they have brought to the discharge of their duties.

THE INDIAN HONOURS LIST.

THE New Year Indian Honours List has been issued from the India Office. A special feature of the Royal Message is the increase in the number of appointments to the Order of the Indian Empire and the Order of the Star of India, in commemoration of the fiftieth anniversary of the assumption of the government of India by the British Sovereign. An increase in the pay of Indian officers and men is also announced. The honours awarded are bestowed chiefly upon native princes and officials, and upon members of the Indian Civil Service; but, in addition, the following officers of the Indian Medical Service are honoured: Surgeon-General Gerald Bomford, C.I.E., M.D., Director-General, I.M.S., is made a Knight Commander of the Order of the Indian Empire; Lieutenant-Colonel John Tasman Waddell Leslie, M.B., I.M.S., Sanitary Commissioner with the Government of India, and Major Walter Hood Orr, I.M.S., Civil Surgeon of the Bahraich District, United Provinces, are made Companions of the Order of the Indian Empire; and Captain Eugene John O'Meara, I.M.S., Civil Surgeon of Mirzapur, United Provinces, receives the Kaiser-i-Hind medal for public service in India.

PRAYER AS AN INSTRUMENT OF MURDER.

HEALING by prayer—or, at any rate, talk about it—is much with us just now. We have also a dim notion that there exists, or did exist, a society for the suppression of vivisection by prayer. Possibly because this has failed, the spiritual weapon is now turned against the vivisector himself. The idea is not altogether new, for it is recorded in the life of the late Dr. Anna Kingsford that she used to boast of the vivisectors whom she had done to death by the power of her will. If we remember aright the poor lady had to confess that she had found Pasteur too tough a subject; at any rate her efforts to "remove" him by the spiritual forces she claimed to have at her disposal for some reason or other were not successful. Prayer is now suggested as a lethal weapon to be aimed at vivisectors. There has recently come into our hands a printed document with a covering letter signed "M. Cowan" without date or address. It would appear that it is being sent to assistants in laboratories. The writer says: "Some little "time ago, in the coffee room of a London hotel, I "chanced to hear one of the party at a table close by "narrate how he knew a person who was in the habit "of praying from time to time for the death of one of "our leading vivisectors; he said that always the "man indicated had died. I tried to trace the "speaker, but, as time had elapsed, did not succeed in "doing so; I then thought, as I myself know of the "efficiency of prayer, it would be well to try "if this were actually so. I thought first of "experimenting on Dr. Starling; but it seemed "to me unfair to give such a stab in the dark "without first letting it be known what was intended. "It seemed also almost cruel, without knowing any "of the surrounding circumstances, to select at random "one from the large number of distinguished scientists "on the medical lists. It was, therefore, finally "decided to make earnest prayer, giving much thought "to the subject, that the Almighty, if the prayer were "in accord with His Will, would promptly remove "'the man most likely to cause future suffering to "innocent subjects by his experiments. About a "fortnight later, one of our most distinguished medi-"cal scientists dropped, and the newspapers were "lamenting the loss to science of this vivisector, and "the discoveries he was just about to make." It would be interesting to know who was the vivisector here stated to have been prayed to death. We hope Professor Starling feels duly grateful for his escape. Further on M. Cowan propounds a theory of anaesthesia which is as new to us as it probably will be to those antivivisectionists who deny that animals can be, or at any rate are, rendered insensible before experiment. We quote the writer's own words: "Our Saviour distinctly "states: 'A sparrow falls not on the ground without "'our Father'; if that be so, then He stands in the "laboratory beside the operating trough. Without "doubt, He it is who so often gives an in-"sensibility to the agonies endured, which seems "unaccountable to the operator. But does He "protect the operator and the watching students "from the hardening and vitiating effect of "constantly participating in cruelty?" We are further told that "The prayer of the child of God "reaches further, is more searching in its effects, "than any enactment of the law can be. Not only "does it enter the vivisecting room, embracing all "operations there; it is with the patients in our "hospitals, and by the bedside of the poorest "sufferer, and it will make its way into the "garret or concealed chamber where the student, "eager for knowledge and advancement, illegally "tortures his helpless victim from day to day."

We gather from this that the "child of God" is not above using the weapons of the devil, who is described as the father of lies. How else can odious calumnies which directly spring from the wish to believe evil be accounted for? Ignorance cannot absolve a writer when the means of knowing the truth are within easy reach of all. We will not quote further from a document which may be described as a mixture of cant flavoured with blasphemy. But though the thing is too foolish to influence even the mind of the average anti-vivisectionist, it has a serious side. What can be thought of the motive which leads a person who is virtually anonymous to send such stuff not to vivisectors, but to laboratory assistants, on the minds of some of whom it is at least conceivable that it might have some effect? Fanaticism is a law unto itself, and to invite the servants in a laboratory to pray for the death of the workers in whose employment they are might possibly be an incentive to crime.

OPSONINS.

AFTER having spent several months in the laboratories of St. Mary's Hospital, learning from Sir Almroth Wright the technique of determining opsonic indices, etc., Dr. G. Wolfsohn returned to the Schöneberg (Augusta-Victoria) Hospital and continued his observations on the diagnostic, prognostic, and therapeutic methods which depend on estimations of the opsonic content of the serum of patients. The opinion which he expresses[1] on the value of the methods is worth considering, especially since his personal studies under Sir Almroth Wright may be taken as a guarantee that he has mastered the technique sufficiently to obviate errors due to want of proper carrying out of details. After briefly describing the technique and the application of the counts, Dr. Wolfsohn proceeds to discuss the doctrine on theoretical grounds. If the doctrine were sound, we should, he holds, possess a numerical measure of the protective arrangements of the organism, an extremely delicate biological diagnostic test and a certain indication for immunizing efforts. Unfortunately, he says, the doctrine including the theoretical basis as well as its practical application, cannot be accepted *in toto*. He leaves the question as to the nature and origin of opsonins unsettled, but he states that much doubt exists whether phagocytosis is tantamount to immunity. Bacteria which have been subjected to that process have been shown to retain their vitality and power of growth; it has been shown that, as far as vital processes are concerned, bacteria behave differently in the organism from the way they behave *in vitro*, and clinical experience has demonstrated that Wright's doctrine does not always tally with actual facts. In illustration of this Dr. Wolfsohn cites the rising of the opsonic index in cases of surgical tuberculosis observed by McIntosh, in which no improvement was taking place. The author further finds that the opsonic index towards the pathogenic bacterium varies in cases in which it also varies towards other pathogenic micro-organisms. In the course of his observations he came across a scarlatina patient whose serum yielded a very high index to typhoid bacilli, and, in accordance with Wright's doctrines, the diagnosis of typhoid fever would have to be made. The same thing was found in several cases of staphylococcic infections and of tuberculosis. This, together with the fact that the raising of the index and clinical improvement do not run parallel, detract from the specific diagnostic value of the opsonic index. Dr. Wolfsohn further discusses the sources of error in the counting, and states that in spite of considerable experience, on controlling his counts, differences which might amount to 20 per cent. presented themselves. He therefore concludes that Wright's method of determining opsonic indices is not suitable for clinical diagnosis, by reason of its complicated nature and its high experimental error, and that certain diagnoses would be possible only when very large numbers of cells were counted, and the results were very distinct. With regard to the vaccine therapy, Dr. Wolfsohn is inclined to believe that it has a future. He has, however, applied it only in 14 cases, in all of which but one, a case of staphylococcic sepsis in which no effect was produced, the vaccines seemed to do good. With regard to actual objective improvement he expresses himself very guardedly.

[1] *Berl. klin. Woch.*, December 7th, 1908.

ACCIDENT INSURANCE IN GERMANY.

IN the year 1887 the German *Reichsversicherungsamt* determined that every alteration of the intact condition of those portions of limbs which are used in working lessens the capacity for work, and therefore reduces the power of earning. This had especial reference to the hands. In 1904 the decision was modified to the extent that slight injuries to the fingers were not regarded as justifying a permanent compensation, since the individual sooner or later would become accustomed to the altered condition of the hand, and would be able to make full use of it. It would, therefore, not be necessary for the insurance society to prove an objective improvement in order to lessen or stop compensatory payments, provided that it could be shown that the individual could use his hands sufficiently well for the purposes of his work. This matter is discussed by Dr. G. Ledderhose[1] in connexion with a pamphlet which the North German Iron and Steel Works Society has published. In the pamphlet, some 83 cases of finger injuries and 13 cases of eye injury are detailed, with which the *Reichsversicherungsamt* and the Court of Arbitration have dealt. With regard to the interpretation of what is a slight ("*geringfügige*") injury of a finger, decisions creating a precedent have been given to the effect that the following injuries are included: The loss of the distal phalanx of any one finger, if the scar is satisfactory; the loss of the ungual and second phalanx of the four fingers of the right hand; the loss of the ungual phalanx of two fingers under certain conditions; and the loss of the whole of the ring, middle, or little finger of the left hand. It is believed that use may compensate these losses and that the hands may regain their full capabilities. Ledderhose appeals to medical practitioners to support the decisions. He wishes them, however, clearly to understand that there are limitations within which these decisions hold good. It may be mentioned by the way that the findings of the Court of Arbitration were not acted on. In one case it was decided, however, that compensation need not be made by the insurance societies for slight inconveniences. Ledderhose holds strongly that injuries such as those mentioned, but which leave adherent scars, trophic disturbances, etc., should not be included, and that when the function of the hand is actually limited by the loss on account of the impossibility of using that portion of the hand which was injured, the individual has a claim for permanent compensation. In submitting a claim for a permanent weekly compensation for an injury to the hand, the claimant should have a good sketch of the injured

[1] *Deut. med. Woch.*, November 19th, 1908.

part and an exact description of the permanent condition of the joints, stumps, skin, etc., laid before the judges. This ought to be done by the medical man called upon to pass an opinion on the case. The final decision will in all cases depend on the presence or absence of such conditions as contracted scars, loss of muscular power in the hand, tremors, atrophy of bones, etc. In presenting this opinion, the medical man should always remember that the laity is incapable of judging whether limitations of function are real or feigned, and it is for him to supply the information that is required. When the question is asked of the medical expert, whether a finger which has been injured will in the course of time, and without change in the objective condition, cause so little inconvenience to the individual as to permit of full use of the hand, Ledderhose considers that no opinion should be expressed as it is never possible to predict complete adjustment to the altered condition with sufficient certainty to justify a confident reply. The whole question illustrates the fact that the German insurance provisions have gradually become evolved from a condition in which the workman derives more benefit than his injuries justified to one in which every contributing factor has to be taken into account in determining whether or not compensation shall be paid. The workmen naturally wish to claim as much as possible, while it is the object of the *Reichsversicherungamt* to settle each claim as fairly as possible. The medical man who is consulted should preserve a strictly neutral attitude.

MEDICAL TERMS IN THE NEW ENGLISH DICTIONARY.[1]

THE first part of the *Oxford English Dictionary* for the year 1909 is a treble section, which carries the work from *premisal* to *prophesier*, and contains 4,381 words, including the many *pre's* and *pro's*. There are many medical terms, some of them the product of yesterday (for example, *pro-oestrum*), others several centuries old (for example, *probe*). The last-named word (*probe*) is regarded as an adaptation of the late Latin *proba*, a proof, in mediaeval Latin also an examination, being formed on *probare*, to try or test; its chief meaning is the surgical one of "an instru-"ment, commonly of silver, with a blunt end, for "exploring the direction and depth of wounds and "sinuses." The earliest illustrative quotation is from a book by Hollyband, dated 1580, and reads "Une petite esprouvette, a small instrument where-"with surgeons do search wounds, a probe." From its use in surgery *probe* has gained its figurative employment, illustrated by a quotation (of date 1876) from one of Lowell's odes, "We who believe Life's bases rest "Beyond the probe of chemic test." *Prodroma*, with its plural *prodromata*, is another interesting medical term; it is, as Sir James Murray points out, an erroneous formation, apparently in imitation of such etymological forms as *carcinoma*, *carcinomata*, and it "possibly originated in a Latin *prodroma*, singular "for Gr. προδρομή, a running forward, or in mistaking "the neuter plural πρόδρομα for a singular." It is, therefore, more correct etymologically to say the *prodroma* of the disease were so and so than the *prodromata* were so and so, but custom has justified the latter erroneous plural form. There are two correct singular forms, *prodrome* and *prodromus* (plural *prodromi*); but the former has been little used and the latter is not fully naturalized. All these terms have the same meaning—namely, a premonitory symptom of disease; thus Blancard (in 1693) defined *prodromus* as "a Disease that comes before "a greater, as the straitness of the Breast predicts a "consumption." *Prognosis*, from the Greek πρόγνωσις, a recognizing beforehand or foreknowledge, means "a "forecast of the probable course and termination of a "case of disease; also, the action or art of making "such a forecast"; and Sir James Murray has found for his readers the following self-sure and egotistical pronouncement in the *Medical Journal* of 1805: "I had arrived to that certainty of prognosis, that "I could have insured the life of an individual by the "treatment I recommended, and his death by any "other." Methinks, the gentleman doth profess too much! There is a group of allied words which are associated with *prognosis* in the Dictionary—namely, *prognose*, *prognostic*, *prognosticable*, *prognostical*, *prognostically*, *prognosticant*, *prognosticate*, *prognostication*, *prognosticator*, *prognosticatory*, *prognosticon*, *prognosticous*, and *prognostify*. *Proleptic* is a less known word; it is applied to "a periodical disease, "of which the paroxysm recurs each time at an "earlier hour," and a quotation explains it thus: "So that if the Ague come to-day at four of the "Clock, then to-morrow one hour sooner, and so "on"; the Greek word from which prolepsis comes is προλαμβάνειν, to anticipate. We have referred above to the interesting word *probe*; but this part of the Dictionary also contains the synonymous term *privet* (that is, *provet*), from the French *éprouvette* and *éprouver*, to search out; a sixteenth century quotation speaks of the "provet or soundinge irone" as being used to "sounde the depth of the fistle." Among medical terms which have taken on a more specialized meaning in modern times is *prepotency*; it is defined as "the propotent power of a parent "organism to transmit special characteristics to off-"spring," and *prepotent* itself means "having a "greater power of transmitting hereditary features "or qualities." The earlier meaning of the word was simply predominant or pre-eminent in power, and as such it was employed by Sir Thomas Browne and many others, until Charles Darwin in 1859 gave it its more restricted signification. Other interesting medical terms are *prenatal*, *prepollex*, *prepuce*, *presbyopia*, *prescription*, *presentation* (in its obstetrical use), *presphenoid*, *presystolic*, *priapism*, *primipara*, and *pronation*; but from the examples referred to above the reader will at once see that Sir James Murray's big undertaking fully maintains its high reputation for scholarship and interest.

[1] *A New English Dictionary on Historical Principles.* Edited by Sir James A. H. Murray. Vol. vii. Premisal—Prophesier. Oxford: at the Clarendon Press. London, Edinburgh, Glasgow, New York, Toronto, and Melbourne: Henry Frowde. Treble section. January 1st, 1909. (Price 7s. 6d.)

DEATH OF DR. ARGYLL ROBERTSON.

THE announcement of the death at Gondal, in India, of Dr. Argyll Robertson will be received with general regret throughout the medical profession, to which his name was so well known, and with feelings of deep sorrow by those who had the privilege of his personal acquaintance. Dr. Argyll Robertson, who was in his seventy-second year, settled in Jersey when he left Edinburgh; but though he had retired from practice he retained his interest in ophthalmology, and attended the Section of Ophthalmology at the annual meeting of the British Medical Association at Sheffield last July. He started for India with the daughter and son-in-law of the Thakur of Gondal so recently as November 30th. We propose to publish some account of his life and work in our next issue.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND SALFORD.

THE MIDWIVES ACT.

GREAT satisfaction has been expressed in Manchester, and still more in Salford, at the announcement that the Lord President of the Privy Council has appointed a departmental committee to consider the working of the Midwives Act. Manchester is, perhaps, more favoured than most parts of the country, seeing that the Manchester Midwives Supervising Committee has for two years carried out in a satisfactory way a scheme of providing medical assistance to patients whose weekly income is below a fixed amount. If evidence were needed of the value of the work accomplished by the Joint Committee of the Manchester and Salford Divisions of the British Medical Association, it would only be necessary to call to mind the fact that it was very largely due to the energetic action of this committee that the Midwives Supervising Committee was induced two years ago to initiate the scheme. The cost to the corporation has been very small, in fact insignificant, compared with the benefit that must have been derived by parturient women, who can now rely on getting medical aid, whatever their position in life may be, whenever a midwife considers such aid necessary.

Exactly the opposite state of affairs, however, exists in the neighbouring borough of Salford. Here the corporation has refused to make any provision for medical assistance in confinement cases, while the board of guardians, not content with offering a scheme which is altogether unsatisfactory to the medical profession, has actually without protest allowed individual guardians to cast unfounded aspersions on members of the deputation that represented both the Medical Guild and the Salford Division of the British Medical Association. The Joint Committee of the Manchester and Salford Divisions is so thoroughly convinced of the lamentable failure of the Act in Salford that it has offered to send several witnesses to give evidence before the committee; it has been informed by the secretary that the departmental committee at its first meeting on December 18th, 1908, resolved "to commence by hearing witnesses on behalf of the central organizations representing the principal interests concerned, and would defer to a later stage the consideration of any applications from individuals or from local associations or Branches to tender evidence." The Joint Committee of the Divisions feel strongly that the committee ought to be fully informed as to the respect in which the Manchester scheme has proved satisfactory, and, on the other hand, how completely the Salford guardians have demonstrated the possibility of making the Midwives Act in certain directions a failure.

TREATMENT OF PHTHISIS IN WORKHOUSES.

At a conference of representatives of Poor-law unions of Lancashire and Cheshire held in Manchester about forty out of forty-four unions were represented. The conference was called to consider the best means to provide special treatment for phthisical cases by combinations of unions or otherwise. It was stated that the three unions of Liverpool had combined to erect a hospital of 54 beds for consumptives. The results, so far as the patients were concerned, had not been satisfactory. There had been a long list of deaths, and after six months' treatment in the hospital most of the patients, on returning to their home surroundings, relapsed into their former state. The weekly cost of each patient at the hospital had been about £3, and it was asserted that, considering the results, this was a serious waste of public money. Several speakers pointed out that the spread of the disease was only to be prevented by the education of the people, in taking of proper precautions, and by the provision of isolation hospitals by boards of guardians. A representative from Rochdale said that during the last nine years 443 cases of consumption had been treated at Rochdale workhouse, and of this number 138 had died in the infirmary. The experience of Bolton was said to be that of every 15 cases sent into sanatoriums 5 came back to die, and 10 were not cured. Mr. A. B. Lowry, Local Government Board Inspector for the North-Western district, stated that in some cases the Local Government Board had refused to sanction proposed combinations of unions pending the report of the Poor-law Commission, and until that report had been issued and fully considered, boards of guardians would have to be careful before launching out into any great expenditure. They would always, however, have to deal with a certain number of phthisical cases and must make provision for them. It was also certainly their duty to take steps to prevent the spread of the disease from parents to children. The recent order of the Local Government Board, which made it obligatory on union medical officers to notify chargeable cases to the health authorities, was a step in this direction. It was subsequently resolved to appoint a committee of nine persons representing Lancashire and three representing Cheshire to take up the whole question, and to submit suggestions on which boards of guardians might act, for dealing with persons suffering from consumption or threatened with it.

THE NOTIFICATION OF BIRTHS ACT IN DARWEN.

The Darwen Corporation has not only adopted the Notification of Births Act, but has apparently made up its mind to administer it in a way offensive to the medical profession. On December 10th four defendants were brought before the Darwen magistrates for not notifying births within thirty-six hours. In one case a doctor said it was an omission on his part, and he was fined 5s. and costs. If that were the only defence made possibly no blame can be attached to the magistrates, as they were bound to carry out the Act. But in another case the defendant—not a medical man—complained that the doctor had not informed him of the necessity of early notification. The Clerk of the Court then asked the defendant if he meant to suggest that the doctor ought to have been summoned instead of himself, and when he replied in the affirmative, the Clerk said: "I think so, too." The Town Clerk explained that the defendant was liable unless he had a reasonable cause to believe that some one else was giving the notice, and the Chairman of the magistrates said that ignorance of the law was no excuse, and the defendant would be fined 5s., "for which," said the Chairman, "you can ask the doctor." It might almost be assumed that this was said in a bantering way; but the defendant did not take it so, for he said: "Can I have a magistrate's order for the doctor to pay the money?" To this the Clerk of the Court replied: "You can ask the doctor to refund it, and if he doesn't the Town Clerk will consider about summoning him." There is nothing in the Act of Parliament that makes the medical man any more liable than the father, and the remarks of the Clerk can only be taken as a deliberate attempt to read into the Act something that is not only not there, but something that was never intended. It seems to us that the Clerk distinctly exceeded his duty in making such a suggestion. It was prophesied over and over again when this Act was under discussion that there would be a disposition gradually to lay all the onus of notifying on the doctor, but even the most pronounced opponent of the Act hardly dreamt that such a barefaced attempt as this would so soon be made to strain the plain meaning of the Act. The decision of the magistrates to fine the defendant 5s. was of course strictly legal; it would have been strictly legal, too, to summon the doctor and to fine him if he had had no satisfactory excuse; but to suggest for one moment that a man not before the court, and with no opportunity of defending himself, was really the guilty party rather than the defendant who was actually fined, is surely a gross injustice and an abuse of the Clerk's position.

WEST YORKSHIRE.

BRADFORD ROYAL INFIRMARY.

THE Lord Mayor of Bradford, as is customary, provided the Christmas dinners at all the Bradford hospitals—the Royal Infirmary, the Royal Eye and Ear Hospital, the Children's Hospital, and St. Catherine's Home for Cancer and Incurables. Accompanied by a large number of the interested public, he made a round of the hospitals on Christmas Day. In a speech at the Royal Infirmary, the

Chairman of the House Committee for the first time appealed for support for the erection of an entirely new infirmary. The existing building, he said, was old, and a new building could be better equipped and worked with much more economy.

Medical Men and Midwives.

The case in which Dr. F. K. March, of Bradford, was charged at the Westminster Police Court on December 30th with knowingly aiding one Jane Emily Inglis, of Bradford, unlawfully and fraudulently to secure a certificate of admission to the *Midwives' Roll* is one which should be noted by all medical men. Dr. March has practised in Bradford for many years; his long and honourable career and high professional position are known to all his brethren in that city, and much sympathy is felt with him in the position in which he found himself placed. He had given a certificate to the woman that she had been in bona fide practice as a midwife since 1885, and was trustworthy, sober, and of good moral character; she was accordingly admitted to the *Midwives' Roll* in 1904, and remained thereon until March, 1908, when a report was made to the Central Midwives Board that she had been guilty of negligence and misconduct in the exercise of her calling. Inquiries then made showed that she had been tried at the Leeds Assizes for murder, the indictment alleging the death of a woman arising out of an illegal operation; she was convicted of manslaughter and sentenced to three years' penal servitude. Dr. March having no knowledge of these facts gave the certificate in good faith. The magistrate expressed the opinion that the Director of Public Prosecutions was justified in the course he had taken, as it was very important that the medical profession should understand that certificates of character of persons who desired to practise as midwives were not mere matters of form; that Dr. March had acted carelessly was unquestionable, but after the explanation given the case against him would be dismissed. The magistrate committed the woman for trial to the Old Bailey, bail being allowed. The case shows the necessity for the most careful investigation into the antecedents of persons applying for certificates.

LEEDS.

The Medical Inspection of School Children in Leeds.

After a good deal of discussion, and after hearing representations from various quarters, the Elementary Education Subcommittee of the Leeds Corporation has recommended the appointment of a medical officer to devote the whole of his time to the inspection of school children in Leeds at a salary of £350 per annum. They also recommended the appointment of medical practitioners to assist in the work. These must be prepared to devote one, two, or three half days in the week to medical inspection at a remuneration of one guinea for each half-day's service of thirty examinations. These posts are to be advertised.

Ireland.

[From our Special Correspondent.]

Research Defence Society.

The Presidents of the Royal College of Physicians, the Royal College of Surgeons, and the Royal Academy of Medicine have addressed a circular letter to the members of the profession in Ireland, asking them to join in the formation of a Dublin branch of the Research Defence Society. The principal object will be to instruct the public in the facts and to show the purposes of experiments on living animals. Already a large number of lay members have intimated their willingness to join, among these being the Archbishop of Dublin, Right Honourable Viscount Iveagh, K.P., Right Honourable Lord Ashbourne, the Dean of St. Patrick's, the Bishop of Clogher, Very Rev. W. Delany, S.J., Sir Howard Grubb, F.R.S., Rev. Dr. Groyan, Regius Professor of Divinity, General Sir Neville Lyttleton, Viscount Monk, Archdeacon of Ardagh, the Bishop of Tuam, the Earl of Pembroke, Sir A. Porter, Bart., late Master of the Rolls, Sir Frederick Shaw, Bart., the Provost of Trinity College, the Dean of the Chapel Royal, the Vice-Provost of Trinity College, etc.

The New National University of Ireland.

The Gaelic League still pursues its campaign to induce the Senate of the National University to adopt Irish as a compulsory subject. Boards of guardians, county councils, corporations, and all sorts of public bodies have been enlisted in the crusade and are passing resolutions in support of the league's claims. Then there are many letter writers, of whom Colonel Maurice Moore, C.B., is perhaps the most emphatic. He says of those who are opposed to compulsory Irish:

> They want a university to give a Catholic education to all English-speaking Catholics, whether English or Irish, Australian or American. Ireland is the selected site, because it lies between the two Continents, and Dublin is a convenient port; the Irish nation is an accident not worth considering among those other great peoples. . . .
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> What is it we want instead of this cosmopolitan university? We want, and we are determined to get, a university for Irishmen above all things, and for the Irish language. If the new university is not that, whether it is Catholic or Protestant, it is not for us; it is for the foreigner. And these demands are made not by any clique or league, but by the Irish people.
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> This struggle for a national university is a matter of principle, on which there can be no compromise; they are determined to fight the battle to the end and risk everything on the result. If the Senate refuses to make Irish compulsory for the matriculation of all Irishmen, there will be a five years' agitation against the new university, and every opposition will be made to the foundation of scholarships. Every anti-Irish senator will be marked down and his seat challenged at the next election, whether he be a Protestant, a Jesuit, or a bishop.

Mr. Charles Kennedy, chairman of Jervis Street Hospital, who died a couple of weeks ago at an advanced age, left a large sum of money. It is rumoured that the Provincial of the Jesuits in Great Britain and Ireland will benefit to the extent of over £100,000, but it is understood that it is intended to use this money for the erection of students' residences in connexion with the new university.

The Dispensary System.

Those of our readers who take an interest in Irish Poor-law affairs will recollect that some years ago the Irish Local Government Board decided to amalgamate three dispensary districts in the Ardee union into two, and to divide the salary of the abolished district between the two remaining medical officers because the guardians of that union would not give three medical officers a living wage. The Irish Medical Association took the case into court, but was defeated. A deputation from the village of Cullon, the centre of the absorbed district, and from the neighbourhood, recently waited upon the Ardee Board of Guardians to request it to try to induce the Local Government Board to revert to the former state of things, and we note that the guardians were willing to accede to the request provided they could deprive the existing medical officers of the additions the absorption of the Cullon district had made to their salaries. The deputation urged as the reason for advocating a reversion to the old order the hardships inflicted upon the poor by having to go so much further for a doctor.

We referred some weeks ago to the dispute going on in Castlerae Union, where the guardians, having been defeated in their effort to upset the sealed order of the Local Government Board providing five dispensary districts for that union instead of four, have, we observe by the local papers, decided to appeal, but not unanimously. It seems time that the whole Irish dispensary service was reformed, in the interest not of those who, while able to pay, want their doctoring cheap, but of the real poor, "the ultimate peasant on the hillside," who has to depend upon State aid in his hour of need.

Scotland.

[From our Special Correspondents.]

Scottish Medical and Dental Defence Union.

At the annual general meeting of the Medical and Dental Defence Union of Scotland, Limited, in Glasgow, Sir Hector C. Cameron occupied the chair, and there was a large attendance of members.

In moving the adoption of the annual report and statement of accounts, the Chairman remarked that the

accounts disclosed more marked progress than in any previous year. He referred to the statement submitted by the Council that a large proportion of threatened actions on being taken up by the Union were abandoned, and expressed the view that this illustrated the benefit of such an association. There could be no question that an association always suggested to persons considering proceedings that they would have a much more serious opposition than if they had to deal only with individuals. He also referred to the fact that the number of claims against dentists by dissatisfied patients was greater in proportion to relative numbers than in the case of medical men. The membership at the close of the previous year was 966; 240 new members were admitted during the year under review, being an increase of one-fourth. The Union had invested funds amounting to £1,204 9s., and the income for the year was £586, with an expenditure of only £270 15s. The Chairman thought that the members might congratulate themselves very much on these figures as showing that progress was satisfactory and consistent. Reference was made to the printed forms issued by the Union for the use of practitioners, there being an indemnity form to be granted by friends of patients in respect of lunacy certificates, and an agreement for use between practitioner and assistant. Dr. Crawford Renton seconded the adoption of the report and statement of accounts, and this was unanimously agreed to. The officers were re-elected as follows:

Presidents.—Sir A. R. Simpson, Edinburgh; Professor Stephenson, Aberdeen; Professor Sir Hector C. Cameron, Glasgow; and Professor Kynoch, Dundee.

Vice-Presidents.—Drs. Affleck, Berry Hart, and Murdoch Brown, Edinburgh; Professor Samson Gemmell, Glasgow; Drs. Crawford Renton and Parry, Glasgow; Drs. John Gordon, Scott Riddell, and Westland, Aberdeen; Mr. Greig, Dundee; Dr. McLachlan, Dumbarton; Dr. Frew and Mr. Lipscomb, L.D.S., Kilmarnock; Dr. Ritchie, Dunoon; Dr. Graham, Paisley; Dr. Laurie, Greenock; Dr. David J. Penney, Rothesay; Dr. Livingstone Loudon, Hamilton; Dr. MacPhail, Coatbridge; Dr. Kennedy, Perth; Dr. MacAlister, Forfar; Dr. Curror, Kirkcaldy; Drs. Moir and Kerr and Mr. Fraser, L.D.S., Inverness; Dr. Clarke, Dumfries; Dr. Dale, Stranraer; and Dr. Ronaldson, Haddington.

Members of Central Council.—Dr. John Gordon, Aberdeen; Professor Kynoch, Dundee; and Dr. G. Balfour Marshall, Glasgow.

New Infirmary for Perth.

At a recent meeting of the directors of the City and County of Perth Royal Infirmary, it was unanimously resolved to proceed with the erection of a new infirmary, to consist of 150 beds, at an estimated cost of £400 per bed. The chairman and deputy-chairman were requested forthwith to issue a circular appealing for £10,000, this sum being still required to complete the scheme, principally in consequence of subscriptions originally dedicated for reconstruction having been found to be not available for the scheme as modified by the directors.

Sydney.

[From our Special Correspondent.]

Pure Food and Quack Medicines.

At the end of 1907, just prior to Parliament going into recess, the Premier introduced a Bill into the Legislative Assembly providing for the purity of the food supply. The bill was subsequently scrutinized by commercial men and others, and several amendments were suggested. As a consequence of this, the bill was to some extent recast, and again introduced into Parliament in November, 1908. It consists of fifty-two clauses, but the whole purport of the measure is contained in one clause, which sets forth what is meant by food adulteration. This is defined in the following way:

(1) When it contains, or is mixed with or diluted with, any substance in any quantity or in any proportion which diminishes in any manner its food value or nutritive properties as compared with such article in a pure or normal state, and in an undeteriorated or sound condition; (2) when it contains or is mixed with or diluted with any substance of lower commercial value than such article in a pure state; or (3) when either wholly or in part it does not comply with a standard therefor prescribed by any regulation; (4) when it contains any substance prohibited by the regulations; (5) when it contains any substance concerning which any restrictive regulation has been made in excess of any quantity or proportion permitted by such regulation; (6) when it is mixed, coloured, powdered, coated, or stained in a manner whereby damage or inferiority may be concealed; (7) when it consists wholly or in part of a filthy, decomposed, or putrid animal or vegetable substance, or of any portion of an animal unfit for food, whether manufactured or not; (8) when it is the product of a diseased animal or of one which has died otherwise than by slaughter; (9) when it is damaged, deteriorated, or perished; (10) when any valuable constituent of the article has been wholly or in part abstracted; (11) when it is in any package, and the contents of the package as originally put up have been removed in whole or in part and other contents have been placed in such package, or if it fails to bear on the package or on the label attached thereto, a statement of the quantity or proportion of any morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, or acetanilide, or any derivative or preparation of any substances contained therein; (12) when it is in package form, and the contents are stated in terms of weight or measure, and they are not correctly stated on the outside of such package; (13) when it is in package form, and the package or any label attached thereto, bears a statement, design, or device, regarding such article of food or drug, or the ingredients or substance contained therein, which is false or misleading in any particular.

Another clause provides that:

No person shall sell any article of food or any drug which is adulterated or falsely described, or which is packed or enclosed for sale in any manner contrary to any provisions of this Act.

Another clause prohibits the sale of injurious drugs. The bill would give the Governor power to prohibit, by notification in the *Government Gazette*, the advertising or sale of any food or drug which, in the opinion of the Board, is injurious to life or health; it further forbids newspapers to publish any advertisement prohibited under this clause. As regards quack medicines, power is given to the Government to examine these articles, and to compare the results of the examination with the results spoken of in the advertisement. If the results of the analysis do not support the advertisement, the Government may cause this report to be published. Provision is made for the appointment of an advisory committee to assist the Board of Health on all practical scientific questions. This committee is to consist of a proportion of purely scientific members, with a departmental element giving the Government representation, and power is given for representation of the active practical training interest—the Chamber of Commerce and the Chamber of Manufactures, and not more than three persons conversant with trade requirements. This bill is now under discussion in Parliament, and as it is one which appeals to all classes as a very necessary measure it is most probable that it will pass practically in its present form.

Special Correspondence.

EGYPT.

Cairo Main Drainage.

In view of the fact that so many people are now sent to Egypt each winter for reasons of health, a large proportion of whom are compelled to make a short stay in Cairo *en route* to the various desert health resorts such as Helouan and Assuan, a few facts as to the proposed drainage of Cairo may be of general interest. Mr. Carkeek James, the Controller-General of the Cairo Drainage Works, who has been connected for many years with drainage schemes in the Far East, where conditions similar to those of Cairo prevail, has for more than eighteen months studied the problems connected with the Cairo drainage. His final proposals have received the entire approval of the Egyptian Government. Owing to the general flatness of the plain in which Cairo is situated, and to the fact that a suitable site for sewage purification works can only be obtained at a considerable distance, it is impossible to drain the city without pumping being resorted to. A certain small area can be drained by gravitation to the main collecting sewer, but the remainder of the city must be drained on the "sectional system"—that is to say, this area must be subdivided, and the sewage from each such subdivision must be lifted by suitable means, and discharged into the main collecting sewer. In Cairo, the number of days in the year on which rain falls is small, but after even a moderately heavy downpour there is a large amount of surface water to be disposed of. To allow this to enter the sewers would involve heavy expense, not only because

all sewage will have to be artificially lifted one or more times, but also because the sewers, pumping machinery, etc., would have to be increased in size. The station for generating the power for driving the lifting arrangements in the area drained on the "sectional system" will be situated at Pont Sahel and, as there is no nuisance in connexion with a power station, its proximity to good buildings is not objectionable. The main collecting sewer will start at Pont Ghamra and follow the new road to Teftiche el Koubbeh, thence along the Metarieh to Ein el Chams and from there it will follow the Gebel Canal to the main pumping station, which is to be about a kilometre to the east of the village of Kafr el Gamous. From the main pumping station, the rising main will continue along the south bank of the Gebel Canal and of the Alexander Canal up to the point where this latter makes a right angled bend to the north-west. From here it will go across the desert to the site of the purification works at Khanka, where 26 kilometres to the north of Cairo it is proposed to lay out a sewage farm. All existing cesspits and soakaways are to be abolished in order to put a stop to the pollution of the subsoil and sanitary fittings which, in the case of the native population, will be specially designed to conform with their habits and religious customs, are to be introduced. With regard to the branch sewers, best stoneware pipes will be used and every precaution taken to ensure all being watertight. The trenches in the wider streets of the city will in no case exceed 5 metres in depth and in the narrower streets 3 metres. There is, it is said, a strong feeling in Europe and elsewhere that the excavation of the ground for this scheme is going to lead to much ill-health, but the best authorities on the subject agree that there is no need for anxiety on this account, since the trenches for the sewers will not only be narrow, but also shallow, and the amount of excavation required for them will be small in comparison with the large areas of ground that are now being constantly opened for the construction of hotels and buildings. Moreover, all material excavated on the works will be at once removed, by means of overhead cableways, to the trenches that are being filled in, any surplus material being at once disinfected and carried away. So far as tourists are concerned and those responsible for advising a winter residence in Egypt, it should be noted that no work will be done during the tourist season, as that corresponds with the high Nile, which influences the height of the subsoil water. The excavation work for the sewerage of the city must be carried on in summer, when the Nile is lowest and the subsoil water accordingly at its minimum height.

Correspondence.

THE MEDICAL TREATMENT OF LONDON SCHOOL CHILDREN.

SIR,—A perusal of the report of the Education Committee of the London County Council on the medical treatment of children found to be defective by the Medical Inspectors in the Public Elementary Schools, which was published in the BRITISH MEDICAL JOURNAL of December 26th, pp. 1869–1874, must fill all ratepayers with dismay.

I have no less sympathy for the half-starved, ill-clad, inhygienically housed and consequently diseased children attending the schools, than is felt by any member of the committee, but such sympathy should be tempered by a sense of justice to the general body of citizens, and by a statesmanlike attempt to consider the whole question of political economy involved. I therefore view with alarm the recommendations of the committee, for, if carried into effect, I believe there will be great and unnecessary waste of public funds, in consequence of the proposed scheme overlapping with the ample machinery already in existence, for dealing with those who are unable to pay medical fees in the event of sickness.

I gather from the report that it is proposed: (1) To send all children requiring in-patient treatment to the voluntary hospitals; (2) that "the Council should utilize existing types of institutions, giving financial help if necessary," for all the other children not included in Recommendation (1); (3) that "in districts where there is no prospect of utilizing existing institutions" the Council should erect and suitably equip school clinics or surgeries.

The first proposal, namely, to send all children requiring in-patient treatment to the voluntary hospitals without payment, is a matter for the boards of the various hospitals concerned, but I believe it will prove to be a burden greater than they can bear, if they are to be sufficiently considerate of the claims of the rest of the community.

The second proposal, namely, to send all the remaining children to the out-patient departments of the voluntary hospitals and to subsidize such as are suitable, is not only unsound in principle but is unjust to the hospital subscribers, to those who seek hospital relief, and to the medical men who attend them. It is unjust to those who have given money to endow hospitals or contribute to their support, because they do so, not with a view to relieving the State of responsibility—a responsibility only just recognized—but they give it for the relief of the urgently sick who could obtain extraordinary and proper treatment in no other way. It is unjust to the medical profession, because the ground upon which the services of the honorary staff of a hospital or other charitable institution are given to it, is that it is a charity supported by the voluntary contributions of benevolent members of the community. If this charitable basis be abolished, the claim upon the staff to act as honorary officers ceases. If hospitals accept contributions from public funds in consideration of undertaking the treatment of certain patients, then, as regards the treatment of those patients, they cease to be charitable institutions. If these grants be made to the hospitals for services rendered, it will give rise to such difficulties as to the particular individuals who should receive the payment as to render the scheme impracticable.

The general question as to whether the hospitals should be subsidized by the municipality is another matter. Personally, I should welcome it, as being the thin end of the wedge towards the entire municipalization of hospitals, which is eventually bound to come.

The third proposal, embodied in the rider to the second proposition, namely, to provide school clinics "where within a reasonable time there was no prospect of utilizing existing institutions," although comparatively innocent at first sight, is in reality a far more serious matter than is doubtless generally realized by the ratepayers. It will necessarily involve a large capital expense, because a glance at the map of the county of London, on which existing voluntary hospitals and dispensaries have been marked, and which I understand is published elsewhere in this issue of the JOURNAL, will show that while these institutions are crowded together in the centre, yet towards the periphery they become fewer and fewer in number, until some large areas are left entirely without them. It follows, therefore, that if the committee's recommendation be acted upon, a large number of these school clinics will be established in the near future in this outer ring of London. I submit, however, that the institution of such school clinics is unnecessary, because the machinery of the Poor Law already exists for the relief of those who are too poor to pay for medical treatment, no district of the metropolis being unserved by an infirmary and a staff of district medical officers.

If the public, who have to pay heavily for the various institutions under the Poor Law, had any idea of how ample and excellent this provision for the sick poor is, they would not entertain for a moment the suggestion to multiply still further the already large number of hospitals (Poor Law infirmaries), and other institutions supported entirely out of the rates, where this new work for the school children could be undertaken quite easily, under the auspices of the Poor Law, with but slight increase of staff and modification of already existing buildings, at a comparatively small cost.

For those who know little of the working of the Poor Law I may say that in my own constituency—the Union of St. George Hanover Square—the ratepayers provide for the sick poor an infirmary (in other words, a hospital) containing nearly 800 beds. This institution has an ample staff of resident doctors and trained nurses, is lighted and warmed on the most modern principles, is equipped with an operating theatre, far better than can usually be found in nursing homes to which rich patients have to go, and could further be equipped with any additional apparatus which the Education Committee might dictate, at the

smallest possible cost. All this is in addition to the provision for the sick inmates of the adjoining workhouse, which accommodates 1,700 persons; and to the lying-in wards; to the staff of district medical officers who visit the sick poor in their own homes; and to a dispensary where the poor can be seen or send for medicines. I have quoted only one Union, but all the other metropolitan Unions are similarly and quite as well equipped.

Over and above all this the Metropolitan Asylums Board provides special schools for ringworm, on the Downs near Sutton, Surrey, which were erected on a site of nineteen acres at a capital cost of £107,000; this school is by no means well filled, although, in addition to the resident staff, a skin specialist attends and undertakes the latest treatment of the disease referred to by the Education Committee—namely, the *x* rays.

Special schools for eye diseases under the Metropolitan Asylums Board are also provided at Brentwood on the cottage home plan, on a site of 28 acres, at a capital charge of £107,575 for 300 children; and at Swanley, also on the cottage home plan, on a site of 49 acres, for 300 children at a cost of £128,613. An eye specialist attends both schools, but neither is by any means full. Homes for convalescent children are provided at Herne Bay, Margate, and Rustington. At Herne Bay on 2½ acres, at a cost of £17,249, for 134 children; at Margate on a site of 1¾ acres, at a cost of about £20,000 for 130 children; and at Rustington on 5½ acres, for 120 children at a cost of £36,000. Five homes for mentally defective children have been provided in various parts of London, and one on a site of 7¼ acres at a cost of £13,000 at Witham, Essex.

In view, therefore, of the various excellently equipped infirmaries scattered all over London, few of which are full, and in view also of the ample accommodation of the Metropolitan Asylums Board for the special eye and skin diseases referred to by the Education Committee, it seems to me that it would be an unwarrantable waste of public money to erect or adapt yet other buildings for use as school clinics. I have the greatest respect for the London County Council, but they prove that they ignore or make a clean sweep of existing things, and prefer rather to start their new schemes with everything new from the beginning.

It seems to me far more practical to open a sort of out-patients' department at every infirmary in London—call it school clinic if preferred—where the school children could attend for treatment. The more ill ones could be admitted to the wards straight away, and the less ill ones sent back to their homes or to the school after treatment. Of course it would be necessary to increase the nursing and medical staff, but this could best be done by having a sufficiently large number of part-time non-resident officers who would work in shifts. If this system were extended to the voluntary hospitals it would put an end to the overcrowding and abuse of hospital out-patient departments, since all the cases not suitable for teaching students or needing the knowledge of experts could be drafted on to the proposed out-patient departments of the infirmaries.

The scheme outlined above would be the best—and, to my mind, the only practical one—for preventing the abuse of public funds by those able to pay for themselves. Under the existing Poor-law regulations medical relief is given, where possible, only as "relief by way of loan," the cost of which is recovered in weekly payments from those receiving it; or, if the recipients state that they are too poor to pay, their circumstances are verified by the relieving officers who visit them in their own homes and are therefore in a better position to advise as to the true facts of a case than any hospital almoner can possibly be. An even better plan than that of increasing the numbers of relieving officers would be to combine the duties of school nurse with that of relieving officer; for it is clear that a large number of extra nurses will be required to visit the children actually under treatment in their own homes. Lay visitors of the various health societies and other charitable organizations could do much useful work by undertaking part of this duty, to the benefit of the poor, to whom they could impart some knowledge of the elements of hygiene, and to the ratepayers, who would thus be saved the expense of additional relieving officers.

The objection to this scheme that will doubtless be made is that anything received from the guardians carries with it the "stigma of pauperism." But this objection is invalid since Poor-law medical relief involves no disfranchisement. It is also illogical, for the poor are pauperized far less by being given medical relief out of the rates, to which they themselves contribute or have contributed, than by being given this relief at a voluntary hospital gratis, out of the charity of the medical profession and of the rich—regardless of whether they can pay or not. Finally, I believe that the finding of the Poor-law Commission will remove the objection altogether, since it is an open secret that the new classification of the poor which they will recommend will absolutely dissociate medical relief from other forms of relief, and the genuinely poor from the vagrants. Whether this will prove to be the case or not, I appeal to the Education Committee to take no decisive action in this matter and embark upon no new scheme until the publication of the report of the Royal Commission on the Poor Law.—I am, etc.,

HARVEY HILLIARD, M.R.C.S. and L.R.C.P. Lond.
Guardian of the Poor, St. George's, Hanover Square, and a Manager of the Metropolitan Asylums Board.

London, S.W., Jan. 3rd.

THE DRAFT CHARTER AND THE REFERENDUM.

SIR,—I venture to state that no more astonishing letter from a President of the Association than that in your issue for January 2nd has ever appeared in the columns of the JOURNAL.

In his letter Mr. Simeon Snell explains how he, in his official capacity as President of the Association for the current year, has done what he could to put himself in direct opposition to the action taken by the Council, on behalf of the Association, in accordance with resolutions of the Representative Meeting, which, confirmed as they were by the Council, constitute, in the language of our present regulations, "decisions of the Association." The logical inference to be drawn from the President's action in withholding his signature to the petition to the Privy Council for a Royal Charter of incorporation is, not that he wishes to obtain certain modifications in the text of the Charter—of which modifications we have heard so much of late—but that he is using his official position to prevent the Charter being granted at all. It may be denied that this is the correct view to take of the President's action, but I would still hold that it is the only one which is justified by the facts of the case.

To be obliged to write this letter is most distasteful to me, but I felt that it was necessary to enter a protest against such a regrettable use of the Presidential office, the most distinguished post which the Association is able annually to bestow on any one of its members, and an honour which is conferred not by reason of previous service rendered to or experience of our Association in its central administration and government, but in consideration of the prominent professional and scientific position enjoyed by the member in question in the locality in which the annual meeting is held.—I am, etc.,

H. A. BALLANCE,
Deputy Chairman of Representative Meetings.

Norwich, Jan. 5th.

SIR,—In the agitation that has been going on for some time throughout the country on the above subject the By laws of the Association seem to have been forgotten, or at least to have been treated with scant respect. We hear of individual Branches preparing to oppose officially the present Charter before the Privy Council; and even, where this is not done, there have been not a few instances of Branch meetings specially convened for the sole purpose of directing its council to follow in the footsteps of the South-Western Branch. All this, in my opinion, is diametrically opposed to By-law 7. There it is laid down clearly that the "management *of the affairs of each Branch* shall be vested in a Branch Council." There is nothing else vested in a Branch Council, and by what authority certain Branches have taken—to say the least—most revolutionary steps it would probably tax the ingenuity of the promoters thereof to clearly set out. If the view I have above stated should be legally upheld, another question must inevitably be asked: What about the expense incurred by these Branches for illegal objects? By-law 16 is pretty clear on the

financial aspect, "Out of the money received, etc., . . . the Branch shall defray all *its* expenses," etc. This can only mean legal expenses; and if a Branch can legally only manage its own affairs, to spend money on matters affecting the Association as a whole must be illegal, especially when there are properly constituted authorities for that purpose.

I note with regret our President's letter in the JOURNAL of January 2nd. I had thought that it was the duty of any one holding his high position to give effect to the voice of the Association, as expressed through its constitutional and official mouthpiece, and not to be swayed by his own predilections, or by those of irresponsible parties within the Association. This I have always observed in the case of the presidents of other associations, but unfortunately here, as in some other recent cases, the customs and usages of the outside world are too little regarded within the ranks of our Association.—I am, etc.,

London, N.E., Jan. 2nd. MAJOR GREENWOOD.

SIR,—Before and after the meeting of the members of the Metropolitan Counties Branch called to decide whether steps should be taken to oppose the application for a Charter several asked details as to the twelve and twenty-four members to be elected to the Central Council.

The following facts were given in answer to questions. Other questions that were asked I trust you will allow to be put to those who have raised the present discussion; they show the line along which many members are thinking.

The replies are being awaited; and as the questions were put by moderate men who seem desirous to take an intelligent interest in the Association, may a hope be expressed that some one will answer them?

	12 Members.	24 Members.
How is the United Kingdom to be divided to elect these 12 and 24 men respectively?	Into 12 single member constituencies.	Into 23 single and 1 double member constituencies.
Who will be the candidates in a constituency?	Any member resident in the constituency.	Any member resident in the constituency.
Who will be the nominators in a constituency?	1. Branch Councils in the constituency. 2. Divisions in the constituency. 3. Any 10 members in the constituency.	1. Divisions in the constituency. 2. Any 3 members in a constituency.
Who will be the electors in a constituency?	The Representatives of Divisions in the constituency (no doubt acting as instructed by their Divisions).	The members resident in the constituency.
Are any Representatives of the Branches on this Central Council at present members of the Representative Meeting?	—	Yes.
Are any of these 12 and 24 men likely to be members of the Representative Meeting?	Yes.	Yes.

1. Why do they say that the Representative Meeting *will elect* these twelve men?
2. Why will these twelve men be more likely to support the Representative Meeting as a whole than many or all of the twenty-four men?
3. Why were these facts, if correct, not stated by the country Branch Councils in their recent circulars?
4. Why don't they allow the Medical Secretary to state the facts, and then we should know where we are?
5. If a half to be present with a two-thirds majority of them is good enough for the Representative Meeting, why is it not good enough for the Central Council?
6. What has all this discussion to do with obtaining a Charter?
7. What is behind it all?
8. Will the house-to-house Referendum help the Association to do more for the general practitioner? Will it put down hospital abuse?

—I am, etc.,

London, S.W., Jan. 2nd. E. ROWLAND FOTHERGILL.

SIR,—There is an argument which is being strongly urged in some quarters against the action of the South-Western Branch and others in the matter of the Charter—namely, that to petition for amendment of the Ordinances at the present time will stultify the Association in the eyes of the Privy Council and the public.

I venture to suggest that nothing could be more derogatory to the Association than the lodging of a petition of such moment as one for the grant of a Charter, which lacks the signatures of the three highest officers of the Association—the President, Past-President, and President-elect. It is inexcusable, and the absence of the signatures of these three gentlemen is scarcely likely to escape the attention of the Privy Council—a member of which is, by the way, one of the signatories.

The amendments to the Charter in reference to the Referendum and election of Representatives brought forward at the Sheffield meeting of the Representative Body ought at any cost to have been referred to the members of the Association and a vote taken on them. Better a year's delay in obtaining the Charter than such deplorable action as has been taken by the Council.—I am, etc.,

Putney, S.W., Jan. 2nd. A. DE WINTER BAKER.

SIR,—The members of the Edinburgh Branch were sent the following post-card:

Do you approve of the Branch Council taking the necessary steps to lay before the Privy Council their view that a Referendum should be taken on the requisition of half the Council, and then by letter addressed to every member of the Association?

The following replies have been received:

Approvals...	231
Disapprovals	2
From home	1
Members of Branch	413

We are, etc.,
A. LOGAN TURNER,
FRANCIS D. BOYD,
Honorary Secretaries.

Edinburgh, Jan. 4th.

THE BIRMINGHAM BRANCH AND THE COVENTRY PROVIDENT DISPENSARY.

Testimonial to the late Medical Officers.

SIR,—Eighteen months ago, in response to representations from the Coventry Division, supported by the Birmingham Branch of the British Medical Association, four of the medical officers of the Coventry Provident Dispensary resigned their posts, because they failed to obtain alterations in the rules that were considered necessary in the interests of the profession. Unfortunately, other medical men were found willing to take their posts, in spite of a full knowledge of the causes of the resignations.

In the result the four medical men have sustained considerable pecuniary losses. One has been obliged to leave Coventry for financial reasons; another has experienced serious diminution in his professional income; while a third, Dr. Hird, died in November, 1907, his death being undoubtedly hastened by worry and financial anxiety. Mrs. Hird is left in very straitened circumstances.

The Council of the Birmingham Branch are unanimously of opinion that, in the interests of the Association and of professional unity, a fund should be raised, in the first place to assist Mrs. Hird in her difficulties, and in the next to make presentations to the medical men in token of the approval and sympathy of their professional brethren.

A grant has been applied for from the Central Emergency Fund of the Association.

Since this matter seriously affects the *esprit de corps* of the profession, the Branch Council earnestly appeals to every member to send a contribution to the Honorary Treasurer of the Branch, Dr. Thomas Wilson, 87, Cornwall Street, Birmingham.—We are, etc.,

FRANK MARSH,
President.
ALBERT LUCAS,
J. FURNEAUX JORDAN,
Honorary Secretaries.

Birmingham, Jan. 4th.

The following donations have been received or promised:

	£	s.	d.		£	s.	d.
Frank Marsh	1	1	0	J. Furneaux Jordan ...	1	1	0
Thomas Wilson	1	1	0	Albert Lucas...	1	1	0
Sir Thomas Chavasse ...	1	1	0	W. T. Lydall...	0	10	6
Professor Gilbert Barling	1	1	0	A. W. Nuthall	0	10	6
Professor Priestley Smith	1	1	0	E. N. Nason	0	10	6
W. F. Haslam	1	1	0				

TWO BRAVE WOMEN DOCTORS.

SIR,—The story of the Hyderabad flood has now been overshadowed by that of a far more appalling disaster. Nevertheless the catastrophe that befell the capital of H.H. the Nizam's dominions, three months ago, was of terrible magnitude, and the details published in the newspapers cannot yet have faded from the memories of your readers. The incidents of greatest interest to the medical profession were the destruction of one of the two large hospitals and the flooding of the other, with the saving of its inmates by the resident women doctors, aided by the nursing staff. It is because I think that little attention has been drawn in the medical journals to the heroism of these ladies—though their names were cheered to the echo at the recent Mansion House meeting—that I venture to address this letter to you.

Miss Pinto and Miss Correa, both young women—the latter only obtained her diploma two years ago—were at the time of the flood the resident medical officers of the Victoria Zenana Hospital at a group of beautiful buildings, the corner stone of which was laid by H.R.H. the Princess of Wales. It is unnecessary to repeat the accounts of how, after five days of incessant rain, the water of the river rose, and how eventually the Zenana Hospital was completely surrounded and cut off from all succour; even communication between it and the opposite side of the river being lost. Miss Pinto and Miss Correa had been repeatedly warned of danger by the police authorities of the city and urged to leave, but they refused to evacuate the hospital without orders, or to abandon their patients and their charge. Night came on, and the water still rose, until the danger of which they had been warned became imminent. With the help of the nurses they carried all their patients to the flat roofs of the blocks, contriving for some a partial shelter, a labour not completed until 1 o'clock in the morning, when they, with the whole of the staff, took refuge, though without a particle of shelter, by the sides of those they had saved. Sixty-five women in all crouched in terror throughout that dreadful night; the rain continued to pour on them in torrents—the flood actually rose to within a few inches of their last possible and perilous position, and through the darkness came the crash of falling houses and the despairing cries of drowning people. Dawn brought neither comfort nor relief; all around them was a sea of roaring water; wreckage and heavy beams of timber dashed against the walls of the buildings, which shook at every fresh impact. Death threatened at every moment. A dreadful day succeeded a dreadful night, and it was not until late in the afternoon that the rain slackened, and the flood subsided even more rapidly than it had risen.

In the dusk of evening a small band of rescuers managed to reach the hospital, and eventually with great difficulty, and after hours of labour, got the party down from the roofs to a place of safety, drenched, exhausted, and fainting. Miss Correa's condition was particularly pitiable; her health had been very delicate for a long time before, and the exposure had for immediate result a long and dangerous illness, from which she has not yet recovered. The resident medical officers' quarters, an older and unsubstantial building, collapsed completely, and everything the lady doctors possessed went down the flood.

My knowledge of the circumstances is not derived from newspaper reports, but from the unanimous testimony of private correspondents at Hyderabad. I hope, Sir, that you and your readers will agree with me that these two physically weak young ladies, one herself an invalid, showed devotion to duty and courage worthy of the best traditions of our profession, and that their names deserve a place in the records of its noble deeds.—I am, etc.,

G. H. D. GIMLETTE, Lieutenant-Colonel, I.M.S.
(until lately Director of H.H. the Nizam's Medical Department).

THE FLEA AS A CARRIER OF PLAGUE.

SIR,—In the *Proceedings of the Society of Tropical Medicine*, reported in the JOURNAL of January 2nd, there is a very abbreviated report on an historical incident bearing on the possible spread of plague by the agency of the flea.

The incident is as follows: On the defeat of the Israelites by the Philistines, when the two sons of Eli, Hophni and Phineas, were slain, the Ark of God was taken, carried to Ashdod, and lodged in the temple there. An outbreak of pestilence followed, and, owing to it, the Ark was sent to Gath. There, again, plague occurred, and "he smote the men of the city, both small and great, and they had emerods in their secret parts." Whereupon the Gathites forwarded the Ark to Ekron. "And it came to pass, as the Ark of God came to Ekron, that the Ekronites cried out, saying, They have brought about the Ark of the God of Israel to us, to slay us and our people." "There was a deadly destruction throughout all the city." This plague was evidently of a very acute nature, and not bubonic only, for "the men that died *not* were smitten with the emerods."

These three outbreaks, ascribed to the Ark, thoroughly frightened the Philistines, so that they determined to send back to Israel the captured trophy. They arranged to give, as "a trespass offering," golden images of the things which struck the observation of the people most as connected with the outbreak. They had noted (*a*) the emerods (buboes) on the sick, and the presence of a plague of (*b*) mice (the Hebrew has only one word for *rat* and mouse—*'akhbar*) that marred the land. Five golden "mice" and five golden emerods, placed in a coffer, accompanied the Ark, which was dispatched on a new cart drawn by milch kine. These took the straight line over the frontier to "the way of Beth-shemesh." The journey from Ekron to Beth-shemesh was about 12 to 14 miles, and the cart, at the end, was unaccompanied by the Philistines. There was no human contact. The kine, "lowing as they went," arrived in the field of a Beth-shemite where the wheat was being cut. The people were rejoiced. They made a burnt-offering of the kine, using the wood of the cart for fuel. The Ark being taken aside, curiosity prompted some to look within it. "Punishment" followed, and fifty thousand three score and ten men died for this "offence"!

The points in the story are:

1. Plague was raging at Ashdod.
2. In its temple rats would swarm, as in such buildings at the present day in India, owing to the amount of food of all sorts thrown about.
3. The Ark with its trappings—that is, its three coverings—was interned in the temple.
4. Its coverings were (*a*) "a vail of blue and purple and scarlet"; (*b*) a "*covering of badger skins*"; (*c*) "a cloth wholly of blue."
5. The middle covering of badger skins would thus form an ideal place of refuge for the fleas escaping from the rats dead from plague.
6. Outbreaks of pestilence followed on the arrival of the Ark at Gath and Ekron. At both these places human contact entered also.
7. Since no Philistines went with the Ark to the field of Joshua the Bethshemite, there was no human contact in that instance.
8. Looking into the Ark involved removing the trappings, and hence a disturbance of the fleas in the badger skins.
9. This historical incident I suggest as demonstrating the active part played by the flea in the spread of plague, since it bears strongly with the valuable work of the India Plague Commission on this subject.

In the Literary Supplement of the *Times*, December 31st, 1908, a reviewer of Butler's "Characters" quotes—and here is the suggestion of a controversy not extinct yet—"fifty thousand Bethshemites were destroyed for looking into the Ark of the Covenant, and ten times as many have been ruined for looking too curiously into that book in which that story is recorded."

Sir, I suggest that modern science has afforded an explanation for the singular event mentioned, and has thus cleared, in a natural way, what to many has been a stumbling-block in understanding the severity of this "punishment." Many years ago, whilst travelling in the neighbourhood of Beth-shemesh and Ekron it seemed to me a "hard saying." In 1896 I brought to the notice of a high church dignitary the explanation of the mice and emerods. He did not receive it as it was meant! I trust I am not following "too curiously" this subject, lest some may say "after whom dost thou pursue? after a dead dog, after a flea."—I am, etc.,

London, W., Jan. 1s R. HAVELOCK CHARLES.

THE MUMMIFICATION OF CANCER.

SIR,—I have just read the article which you devoted to my method in your issue of December 12th, 1908. If I have not replied to it sooner, it is because I have only just seen the number in question. I am persuaded that your only desire is to get at the facts, and that is why I now write you.

Of that desire I see evidence in your statements respecting my professional status. However desirous I might be to serve you in this respect, I should hardly feel inclined to personally recount to you the details of my works, which you sharply appreciate. Suffice it to say that Professor Lannelongue, who, in 1906, presented my *Treatise on Operative Technique* to the Paris Academy of Medicine, stated, *inter alia*, that "M. Laurent has published valuable and learned works, certain of which have been presented to the Academies of Medicine and Science of Paris, and on which I build hopes of one day seeing conferred upon him the title of Correspondent."

Let me point out, in the first place, that the value of my method does not consist in the mere fact of the *use* of formol, but rather in the enormous doses and in my manner of using the product. These form a method, a system, which I feel entitled to claim as my own.

You are not convinced of the efficacy of this system. You are entitled to doubt until you have a clear demonstration of the statements placed before you. Like all true scientists, you consider that a clear array of facts should alone carry conviction. So far, you are right. *I am prepared to supply you with these facts by means of two series of demonstrations in London. First, by applying my method to, say, one hundred cases, rendered easily observable to medical men, students, and relatives of the patients.*

As my stay in London would necessarily be limited, I suggest that the medical men should, in the course of the next two months or so, get together a hundred cases of ordinary external cancer, so that the progress of the treatment may be followed by all. These cases should be taken from three hospitals, and from private institutions as well. They should include cancer and sarcoma of the limbs, facial cancer, maxillary sarcoma, cancer of the lip and tongue, sarcoma of the neck, and cancer of the breast. The condition of the patient should be such that a surgeon could eventually undertake to perform an operation. In several cases therapeutic results would be observed as early as the fifth day. Before and during treatment the photograph, radiograph, temperature, and weight of the patient would be taken; his heart, blood, and urine would be examined.

The second series of demonstrations—comprising complicated cases, internal ones included, strength being sufficient—would be held at some subsequent date.

The term "success" must be defined. I recently stated that seventy successes were obtained by Fenwick out of nearly a hundred cases treated by him with bichromate. That is all right. By the term "cure" is implied a clinical cure; for a cancerous subject should, more than a syphilitic one, continue to be examined several times a year.

When we remember that formol may be administered in such heavy doses—10, 20, and even 50 grams—that it is a far more powerful antiseptic than sublimate, and that it is a first-class fixing agent, then the results achieved cease to astonish us. But the technique, though easy in some cases, is comparatively complicated in others. Therefore we must possess: First, a thorough knowledge of anatomy; and, secondly, previous experience in several typical cases. Given these, and being warned against disappointment, medical men will, I believe, be able to profit by my demonstrations, carried out in their presence.

Seeing the progress accomplished by operation, the *x* rays, radium, electricity, and so on, we can hardly doubt that we are on the high road to the cure of cancer. While we are doubtless still far off the day when the cure of cancer will be effected by merely swallowing a few tabloids, I still think that a fair hearing should be given to all substantiated claims of progress in therapeutics. I claim that my system of *formolization*, *mummification*, or *embalming*, and sometimes *fibromation*, does constitute progress. (I have even applied it, with a modified technique, to cases of tuberculosis.) Under these circumstances, and to whatever extent it may have been rendered effectively applicable, I venture to think that you would declare yourself satisfied after following my demonstrations.

Inasmuch as cancer constitutes a grave social danger, not only because of the thousands of lives it destroys every year, but also by reason of the nervous dread of those who live in constant fear of its onslaught, I deemed that I should be rendering some slight service to my fellow countrymen by laying before them the principal facts. I therefore had printed at my expense an illustrated sheet describing cancer; I had 25,000 copies distributed, especially among local sanitary authorities and charitable societies, all over Belgium; and I should have liked very much to have supplied every family in the land with a copy.

In conclusion, Sir, I rely upon your acknowledged sense of justice to give this letter the same publicity which you accorded to the article of which it treats.—I am, etc.,

Brussels, Dec. 24th, 1908. Professor Dr. O. LAURENT.

*** As our attitude to the cancer question has often been misunderstood and sometimes misrepresented, we take this opportunity of stating emphatically once more that our sole object is to prevent, as far as lies in our power, the profession and the public from being misled by unfounded hopes. What is wanted is not rumours and assertions of cures, but irrefragable proof. This can only consist in a sufficiently large number of facts that will bear the closest analysis, and in that analysis it must not be forgotten that accurate diagnosis is an essential factor. The element of time must also be taken into account. In regard to these points we make no distinction between surgical and medicinal or chemical treatment. Professor Laurent makes a sporting offer, but he must know that we have no power to compel hospitals to supply him with patients. He should apply direct to any three London hospitals of good repute; we venture to suggest that the Middlesex should be one of them, as it has a special cancer department and every provision for the testing of new remedies. He might also apply to the Imperial Cancer Research Fund, the directors of which would doubtless help him in getting an opportunity of fully testing his treatment. As for ourselves, we only hold a watching brief; but we assure Professor Laurent that if his method is proved to be successful, though it were only to the extent of materially palliating cancer, nowhere will his achievement find a heartier welcome than in the BRITISH MEDICAL JOURNAL.

SURGICAL TREATMENT OF CHOLELITHIASIS.

SIR,—In the JOURNAL of December 19th, 1908, under the above heading, Hans Kehr (page 93 of the Epitome of Current Medical Literature) is quoted as furnishing to the general practitioner various statistics so that he may be able "to tell his patient, whom he advises to submit himself to the surgeon, what the chances of operative treatment are." His own operations of various kinds number 1,309, out of which number there are altogether 225 deaths, or a percentage of 17.18—that is, roughly speaking, nearly one-fifth—of which it is only fair to say the greatest mortality was in the malignant cases, which amounted to 82 per cent. Deducting the two groups in which the mortality was the highest, "he had 891 operations for uncomplicated gall stones, with 29 deaths—that is, 3.2 per cent." Again in this most extraordinary article, "after dealing with some general considerations with regard to the operations, such as the frequency with which he carried out hepatopexy [whatever that may mean] in his 'ectomy' operations"—your report was good enough to put the word "ectomy" in inverted commas—"as well as the frequency in which he removed the vermiform appendix when this organ, even if quite healthy, protruded into the wound, he discussed the cause of death."

Now, Sir, I am not an operating surgeon, but how any one with the slightest notion of elementary anatomy and the topography of the abdominal organs can conceive of the possibility of an operating surgeon, in the course of an operation for gall stone, finding "the vermiform appendix protruded into the wound" passes my wit to understand, and vitiates the whole value of the article, even if it did not stand self-condemned in many other particulars. I will not touch on the morality of an operator who, while

undertaking a serious and important operation, complicates that operation by a totally unnecessary interference with what he himself describes as an organ "quite healthy," and so risks the success of his primary operation and further imperils the life of his patient. Again, Sir, this heroic operator, who in the course of one serious operation performs another, as it were, takes it in his stride, gives the general practitioner advice as to "when the proper time has come to hand his patient over to the surgeon." Kehr "is convinced that not more than 20 per cent. of gall stone patients need be operated upon." He does not even suggest when the general practitioner has failed in his efforts to assist the passage of the stone *per vias naturales* that this bewildered practitioner should call in the assistance of a consulting physician who may be more experienced than himself in the ways of humouring and coaxing the offending stone through its natural passages and who may have spent many years of study with that object. No! no further chance must be given to the patient, but he must there and then be handed over to the brutal arbitrament of the knife and to the tender mercies of a surgeon who, not content with performing the operation he set out to do, may also indulge in the penchant he evidently has of removing perfectly normal and healthy organs. Truly the old book was wise when it said, "Oh! that mine enemy would write a book!" Now to criticize the statement that not more than 20 per cent. of the cases of gall stones need be operated upon. I have now been in practice many years, and in the course of that time have met with numerous cases of gall stones, and in only one case has it been found necessary to have recourse to operation—a case where Mayo Robson removed from a patient of mine a gall stone which was impacted in the common bile duct. In the early part of my career I made a collection of gall stones which had been passed by my patients through the ordinary channels, and got together a small bottleful of various sizes, from that of little more than sand to some specimens as large as a full-sized marble; and one I remember, which took two full days to pass, was even larger than that, and consisted of an agglomeration of several calculi agglutinated together, which it seemed almost impossible could have been passed through the bile duct, and proved to me that the elasticity and distensibility of that duct was far greater than it had been given credit for. Another point which Kehr in his article does not seem to me to have given any thought to is the fact, which is well known, that certain patients—often stout women of middle age and lethargic temperament—are very prone to pass gall stones at more or less regular intervals. I have met with many such cases. Women who are in the habit of passing these stones know what the symptoms are, and keep by them ready for the emergency a supply of remedies that have been found useful in assisting the passage of these gall stones, and who have become so used to these attacks that very frequently they do not even call in their medical attendant on every occasion they are attacked.

The necessity for operating in cases of gall stones is not only not 20 per cent. of the cases, but it is not even 1 per cent., and Kehr falls into the class of those surgeons I have elsewhere described as "often inexperienced in other safer and more rational methods of treatment." More than that, the mortality of 3.2 per cent. in operations for uncomplicated gall stones is quite excessive and unnecessary, as I am quite convinced that a patient, experienced physician would in a great number—practically the great majority—of these cases have been able to assist the stone to pass without the risk of any operation whatever.—I am, etc.,

Preston, Dec. 21st, 1908. JAMES A. RIGBY.

THE TREATMENT OF SYPHILIS.

SIR,—Whilst agreeing generally with the view of Mr. E. Lane, as set forth in his excellent paper read before the Westminster Division of the Association, on the treatment of syphilis by intramuscular injections of mercury,[1] there are one or two points to which I take exception. As regards the preparation for injection Mr. Lane gives preference to calomel suspended in olive oil, with which one can only partially agree, for undoubted as the fact is that for removing any active signs of the disease no salt of mercury comes up to calomel, still, that this removal is of a transitory nature when compared with the same result which is obtained by the employment of some of the other salts—such, for instance, as metallic mercury—this is not only my own experience, but also that of Fournier, vide the *Traité de la Syphilis*.

So convinced am I as to this that although I always now commence treatment with calomel injections, I limit these to a total of four when I continue treatment with injection of the metallic or salicylic salts.

Again, the preparation he recommends—calomel suspended in olive oil—is so painful that few if any patients would stand it for long. According to Fournier, this pain is in the majority intolerable, but luckily, about two years ago I hit on the idea of adding to the calomel preparation I use a combination of creosote and camphor, with a view to producing analgesia. This has proved quite a success, and now I am enabled to give calomel injections with more or less impunity.

There is one other point in Mr. Lane's paper with which I cannot agree. He advises that in carrying out treatment by intramuscular injections one of gr. $\frac{2}{3}$ of calomel be given once a week for a continuous period of between fifteen to sixteen weeks. Personally I would never sanction giving mercury for this prolonged period without a rest from all treatment, for long before the expiration of such a time the highest physiological effects of mercury would have been attained, and any further administration of it could only lead to disaster. Our practice in the army generally and at the Military Hospital, Rochester Row, when the intramuscular method is employed, is to begin with calomel injections, gr. $\frac{1}{4}$, once a week for four weeks, and then to substitute either metallic mercury or the salicylate salt of same to carry on treatment; the maximum number of injections given never exceed eight—more often six—and then a period of rest from all injections of two months is given. This period of rest is imperative, as the combination of injections and rest carries out what is now recognized by all as essential—"chronic intermittent treatment."—I am, etc.,

F. J. LAMBKIN,
London, W., Dec. 22nd, 1908. Colonel, R.A.M.C.

THE OPERATIVE TREATMENT OF INTRAORAL CANCER.

SIR,—Mr. C. P. Childe, in his paper on this subject, discusses very fully and very ably many technical points on which there is still considerable diversity of practice. With most of his contentions I am in complete agreement, and I believe that surgeons who have most experience of this class of work approximate closely to the procedure he describes. There can be no difference of opinion as to the necessity of wide local removal of the primary disease, and none as to the necessity of complete removal of the whole glandular contents of the submaxillary triangle, and of the chain of glands along the great vessels down to the clavicle in every case. That the dissection of the neck should precede the removal of the primary growth will, I think, equally be agreed, for two reasons—first, in order that this dissection may be carried out aseptically; and, secondly, because many patients who have had the primary growth removed first cannot find courage to submit to a second operation. I assume that in the majority of cases the whole procedure is divided into two separate operations. I am sure that, in spite of some obvious advantages of removing both glands and growth at one operation, the balance of advantage is in favour of two operations.

It is possible in many cases to remove the glands without opening the mouth cavity and so infecting the wound. In these cases the neck wound heals *per primam*, and the second operation can be carried out at the end of six or seven days. Even where the neck wound must necessarily communicate with the oral cavity owing to the position of the growth to be removed, it is better to defer the removal of the latter until the neck wound has healed, or partially healed. I am aware that there is a risk of cancerous reinfection of the neck during the interval, and a risk of re-establishment of collateral circulation, and thus diminishing the advantages of ligaturing the lingual and facial arteries; but I have lost more than one promising case from exhaustion and shock when

[1] SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL, December 19th, 1908, p. 330.

I have been tempted to disregard this risk, and have completed the whole procedure in one operation.

There is another reason which weighs very strongly with me in this matter, and that is the importance of minimizing the interference with deglutition. In addition to removal of a part or whole of the tongue, there is interference with the action of the infrahyoid muscles, swallowing becomes still more difficult, and the danger of inhalation pneumonia thereby increased.

With what Mr. Childe says as to ligature of the lingual and facial arteries I am in entire agreement, and I have practised this as a routine procedure for many years. As the arteries are laid bare by the dissection of the glands it would be foolish not to take advantage of this circumstance, and the procedure is perfectly easy. Personally I always ligature both arteries close to their origin from the external carotid, where they can be found with ease and certainty.

With regard to the avoidance of laryngotomy, it is true, as Mr. Childe says, that preliminary ligature of these vessels makes removal of the corresponding half of the tongue a practically bloodless operation, and obviates the risk of inhalation of any serious quantity of blood. But even a small quantity of blood is apt to obscure the field at a time when a clear view is most necessary; for the precise and certain excision of the primary growth transcends in importance every other part of the operation.

For this reason I have lately employed a preliminary laryngotomy and plugging of the pharynx in almost all cases of removal of intraoral cancers. If the dissection of the neck has been carried out at a previous operation, as is my practice, there is no risk of neck infection from the small wound needed for the laryngotomy. I have found it an entirely harmless procedure, which makes an otherwise difficult intraoral operation quite simple. After the operation is completed the tube is withdrawn, the wound closed, and natural respiration restored.

Mr. Childe does not mention the use of the galvano-cautery. I use this wherever possible for the removal of the primary growth, both as a precaution against local cancer infection and as a means of outlining the parts to be removed without haemorrhage, and therefore with greater precision.—I am, etc.,

EDWARD DEANESLY, F.R.C.S.,
Honorary Surgeon, Wolverhampton and Staffordshire General Hospital.

Wolverhampton, Jan. 2nd.

THE TREATMENT OF FRACTURES OF THE BASE OF THE SKULL.

SIR,—In a paper of much practical value published in the BRITISH MEDICAL JOURNAL of December 26th, 1908, on the treatment of fractures of the base of the skull, by Dr. Maclaren, of Carlisle, a point is emphasized which must be regarded as of cardinal importance in the treatment of fractures of the cranial base attended with a discharge of blood or cerebro-spinal fluid from the ear.

In connexion with this subject I may be permitted to refer to a case which came under my care in Carlisle about thirty years ago. It was that of a boy who fell from a builder's platform placed at a considerable height on to the hard pavement of the street below. He was conveyed on a stretcher to his home about a quarter of a mile away, and when seen, within twenty minutes of the accident, was completely unconscious, convulsed, and had a discharge of blood and cerebro-spinal fluid from the ear.

An unusual feature presented by the case was a complete paralysis of the third cranial nerve, due to the accident, the resulting external strabismus being very pronounced. Acting upon Listerian principles to be observed in the treatment of a compound fracture, the head, which had been shaved for the application of an ice-cap, was cleansed, and the auditory meatus cleared out by means of wet carbolic wool rolled on the end of a probe. The meatus was then packed with cotton-wool wrung out of carbolic solution, and a pad of dry wool fixed over the side of the head. The dressings were changed frequently until discharge had ceased. The boy made a good recovery, and when seen some years after the accident there was nothing to indicate a previous head injury beyond the remains of the third nerve paralysis.

That the danger of septic meningitis in such cases was fully appreciated at any early period of antiseptic surgery may be gathered from a sentence in Caird and Cathcart's *Surgical Handbook* (1889), where, under "Fractures of the Base of the Skull," it is pointed out that "in addition to general treatment an attempt should be made to combat septic meningitis by gently syringing the ear with 1 in 20 carbolic, dusting in iodoform, and plugging with antiseptic wool."

For obvious reasons the syringe, unless very carefully used, is objectionable.—I am, etc.,

Edinburgh, Dec. 28th, 1908. WILLIAM BROWN.

THE ESTIMATION OF SUGAR.

SIR,—The interesting communication by Dr. Alexander Francis on hypnotism in diabetes is illustrated by a table purporting to show the effect on the amount of sugar passed at different dates, and pains have been taken to estimate this quantity in grams per 100 c.cm., grains per fluid ounce and grains per pint, yet the absolutely essential information, namely, the total quantity of urine passed in twenty-four hours, is withheld. The need for knowing the total excretion of sugar if we are to estimate the gravity of a case or the effect of treatment has been repeatedly pointed out, but is apparently still ignored. It would not afford much information respecting B's income to know that he received 5 per cent. upon his invested capital, nor would it add much to be told that for every £1 he receives 1s. and for every five-pound note 5s. In addition to stating that a patient passes so many grains per ounce we should know how many ounces of urine are passed in order to calculate the quantity of sugar excretion *per diem*. A considerable difference in the percentage of sugar may occur without causing any alteration in the total amount. Some time ago a patient handed me a bundle of reports from the Clinical Research Association, each giving merely the number of grains per ounce, and I was struck by a remark of his wife, who said that she had not been able to notice any correspondence between the quantity of sugar as shown by the reports and the care with which he had been able to follow the rules of the diet that had been laid down for him. As this method is so misleading, I wrote to the Director of the Clinical Research Association and suggested that it would be well to notify subscribers of the importance, in estimating sugar, of getting at the total quantity passed in twenty-four hours, which can only be done where the amount of urine has been measured, and I am glad to say that my suggestion has been adopted.—I am, etc.,

Birmingham, Dec. 24th, 1908. ROBERT SAUNDBY.

THE UNGODLY COUGH.

SIR,—Allow me to say a few words about the somewhat important subject, "The Ungodly Cough," as treated in the JOURNAL of November 28th. Some thirty or forty years ago I was in the habit of attending service at one or other of three churches here. Much coughing was present in all of them every winter. It used to make me angry, as I attributed it to disrespectful inattention of the congregation. At one of these churches some 180 Blue-coat boys attended. They used to cough incessantly, just like a pack of hounds finding "scent" again after a very brief check. For years past now no such distracting nuisance is to be found, but remarkable freedom from it. Why? Just because the buildings I speak of were heated with coke, the fumes of whose burning coming from the open gratings of the flues in the aisles tickled not, to be sure, the ears of the groundlings, but the fauces and epiglottides of those up in the galleries and on ground floor alike. Carbonic oxide was the transgressor. Wiser plans of heating have now been adopted. Coughing in packs and paroxysms no longer prevails, and the dear Blue-coat boys are as quiet as well-conducted mice. It is rather humiliating to think that neither doctors nor preachers suspected or investigated the cause of the nuisance alluded to, and my excuse for taking up the cause of "ungodly coughing" is because I fear that many country churches and chapels are still heated by coke.—I am etc.,

Stourbridge. ALFRED FREER, M.R.C.S., L.S.A.

MEDICAL FEES.

SIR,—The article *re* "Medical Fees" in the JOURNAL of September 12th, 1908, p. 760, may well be noted by the profession.

In the first place, it is the first time in my memory that any public official has negatived the idea with which the public seems to be imbued, that a medical man should attend any and all cases whether he is to receive any fee or not. This is a departure of some importance, which may denote that a sense of justice is on the increase, or that the medical profession is becoming more powerful, and less inclined to be—to put it plainly—"cheated" without demur. In the second place, the criticisms as to the sending in of accounts yearly or half-yearly is one that might well be studied, as there is very little doubt that the profession as a whole has lost, and is losing, thousands by this method of procedure, coupled with the prevalent idea that a medical man will not sue for his fees. If accounts were sent monthly, or at latest quarterly, the profession would be so much to the good, especially if it were generally understood that defaulters would be "county courted" after, say, three months.

We live in a strictly business age, when even members of the aristocracy go on to the Stock Exchange and into trade generally, and as the general training of the community is commercial there is small respect or consideration for those who do not conduct their business affairs on business lines. When at Cambridge some three years ago I noted a letter in the local paper, stating that a Cambridge graduate in medicine might expect to make about £400 a year. This seems a very small sum to look forward to after a six or seven years' course and the outlay in money and work. Had the same amount of both been laid out in any other calling much better results would have been attained. Moreover, this is not the final outlay, as post-graduate study is required at intervals, and the constant supply of books and materials required makes a medical outfit more expensive than that of a cavalry officer, chargers and all.

If there is any need to harden the professional heart in regard to recovering their just dues, it is a study of the list of applicants for the British Medical Benevolent Fund, together with the reports of the financial condition of the various friendly societies, whose enormous reserve funds have practically been made out of what amounts to free medical attendance.—I am, etc.,

Ayr, North Queensland. J. BOOTH-CLARKSON.

OLD AGE PENSION MEDICAL CERTIFICATES.

SIR,—The other day I received from the pension officer of the district a batch of forms to be signed by me to the effect that the claimants were "permanently incapacitated through bodily infirmity from attending at the post-office in person" to receive their pensions.

In the case of doctors situated in remote highland and island parishes this work in some cases means many miles of travelling. To whom are we to look for payment for these certificates? Would it be "infra dig." for us to ask it from the "aged veterans of labour"? It is not "infra dig." for postmasters to receive the sum of one shilling sterling for "filling in their papers."

Claimants for a pension get all their other certificates free, and I notice, in reading through the Act, that in the case of all other officials who are required to do clerical or other work in connexion with this huge scheme of national pauperism provision is made for their remuneration. I have looked in vain, however, for some such clause as the following:

> In the case of any old age pensioner who is permanently incapacitated through bodily infirmity from attending at a post office in person, he (or she) shall produce a medical certificate to that effect, *which medical certificate the doctor shall grant free of charge.*

I think the British Medical Association should draw the attention of Parliament to the omission of such a clause, in case any medical man might so far forget himself as to think he was entitled to some remuneration for granting the certificates to which I have alluded.—I am, etc.

Shetland, Dec. 19th, 1908. HENRY PEARSON TAYLOR.

THE EXAMINATION AND CERTIFICATION OF MENTAL PATIENTS.

SIR,—I have read Dr. James Neil's paper on the examination and certification of mental patients, in the BRITISH MEDICAL JOURNAL of October 24th, and also Dr. Cockle's letter on the subject in the issue of November 28th, with the greatest interest.

When a member of the medical profession is asked to see an alleged lunatic it is surely his duty to make a careful examination of the patient with a view to giving advice as to treatment, and not merely to endeavour to obtain evidence upon which to base a certificate of insanity.

The all-important point that the physician has to decide is, whether the patient should be placed under control or not. The relatives, as is only natural, are usually most anxious to avoid certification, and the medical man is reluctant to urge it unless it is absolutely necessary. Insanity is a disease, and, as in all other disorders, the primary aim and object of the physician must be to obtain the best possible treatment for his patient. This in many cases can only be secured in an institution, the restraint being regarded as a part of the treatment.

Should the physician conclude from examination of the patient and information received from the friends that the patient ought to be placed under care, steps must be taken to accomplish this legally. The law requires the medical practitioner first to certify that the patient is of unsound mind and a proper person to be detained under care and treatment, and secondly to state his reasons for arriving at this conclusion.

The facts indicating insanity observed at the time of examination have to be such as will carry conviction to the mind of a layman that the patient is *non compos mentis*. In many instances facts of this character can be readily set down; but in others, though the certifying medical man may be absolutely certain that the patient ought to be placed under care, they are difficult to adduce. It is in this latter class of cases that perseverance and tact are required, and that every effort must be made to obtain material for a satisfactory certificate. Such patients often suspect the medical man, and are consequently very much on their guard in his presence, which enhances the difficulties of the situation. The existence of delusions is commonly considered, by lawyers at any rate, conclusive evidence of insanity, and hence endeavours are made to ascertain if the patient entertains any such, for the purpose of certification. Many people, however, now at large have delusions, and could very possibly be certified in consequence; but this is not done, and rightly so, because their conduct is not sufficiently affected to justify such a step. It is the conduct of the patient that determines the physician's action.

Two patients may hold precisely similar delusions. In one case it may be the duty of the medical man to make use of these delusions to certify the patient, whereas in the other such a course may be absolutely unnecessary.

If a patient is willing to enter an institution as a voluntary boarder, the necessity for immediate certification disappears. This arrangement unfortunately is only possible in the case of patients with private means, as voluntary boarders are not admitted into county asylums. The only alternative to certification for patients unable to pay is a period of probation in the workhouse infirmary.

In conclusion, the idea still unfortunately seems to be prevalent that if a medical man who has made a special study of insanity be called to see a patient he will immediately desire to certify him and have him removed to an asylum. This idea is both mischievous and erroneous and needs correction.—I am, etc.,

Uxbridge. RALPH BROWN, M.B.Lond.

THE LIMITATIONS OF A PURIN-FREE DIET.

SIR,—The purin-free diet, like many another special mode of living, owes its success to the fact that it undoubtedly suits some people remarkably well. That seems to be the best argument against its being universally suitable that we can get. Scarcely two people in any dozen, or perhaps more, whom we meet have similar food tastes or metabolic powers, and it is the little differences which count in ordering a patient's diet.

Some persons seem to have an abnormally sensitive intrahepatic circulation, quite apart from their general circulation. They are often active and nervo-sanguine, or gouty. With such persons an ounce more flesh proteid than their usual amount, or a dessertspoonful of alcohol, or a little more exercise or excitement or mental study than usual, will cause hyperaemia of the liver, which produces extreme mental and physical depression. Such subjects

find their greatest safeguard of health in an almost purin-free diet. Their livers seem to act as blood reservoirs which are easily filled, and no doubt part of their languor and irritability is due to actual cerebral arterial anaemia when the reservoir is full. Very often such patients terminate the first ten days or so of a purin-free diet in an explosive bilious attack due to the suddenly lessened intra-hepatic blood pressure, and with that in their minds terminate also their attempts at a continuance of their treatment. But if they persist in their attempts, after treating by blue pill, etc., the bilious condition, they do well; and it is an interesting fact that, as was lately pointed out in your correspondence, on returning to purins they find they have acquired greater tolerance for them for some considerable time.—I am, etc.,

C. W. LAWSON, M.A., L.R.C.P.S.

Rothbury, Dec. 18th, 1908.

SIR,—I glean from the last paragraph of Dr. Bryce's letter in the JOURNAL of December 12th, p. 1781, that he thinks that I have not watched my cases for a sufficient length of time to appraise the purin-free diet. May I be allowed to mention that during the last five years I have had the opportunity of watching numerous patients who have lived on the diet, for periods varying from a few months to fifteen or more years, and through my position as medical officer to a purin-free diet home, where patients are received for practical instruction in the diet, I think that I can claim a unique experience.

It is unnecessary for me to enlarge upon the superiority of a fleshless diet in athletes. The remarkable records of strength and endurance furnished by flesh abstainers have been sufficiently published.

I quite agree that the purin-free diet has its limitations. Nobody realizes that more than I do. I have been compelled to abandon it myself. But my experience of its effects will not permit me to accept Dr. Bryce's limitations. —I am, etc.,

Slough, Dec. 14th, 1908. W. L. BOWEN DAVIES.

SIR,—My long practical experience leads me to endorse Dr. Alexander Bryce's opinions as expressed in his letter in the JOURNAL of December 12th, 1908. I have experimented upon myself with a purin-free diet with every care, and found it infinite inferior to my limited mixed diet treatment. I have also given it to patients with no better results. On the other hand, patients who have come to me and who have been on a strict purin-free diet, have greatly benefited by a carefully regulated purin and anti-purin diet. Experience has taught me, it is not so much the composition of the food eaten but the quantity which is of the utmost importance in cases of indigestion, gout, rheumatism, and many other diseases. The patient should only be allowed a mixed diet in small quantities, so that there is a distinct hunger for every meal allowed. The food should be very nutritious and of a good quality, in order that waste and faecal material is reduced as much as possible, whereby fermentation is lessened and freedom from autointoxication assured. A diet of this kind, with a regular action of the bowels, is all that is required to obtain the very best results of treatment by diet. The food faddists, who have grown so numerous of late years, are certainly to be condemned on general medical lines.—I am, etc.,

London, W., Jan. 4th. THOMAS DUTTON.

SIR,—Permit me to crave your kind indulgence for another letter on this subject, with especial reference to one or two statements in Dr. Haig's letter in the BRITISH MEDICAL JOURNAL of December 26th, 1908.

He appears to take it for granted, or that it is an established fact, that the healthy have no difficulty in not only subsisting on a purin-free diet, but in maintaining or even improving upon their health and vigour of constitution, if this be possible. He admits that the unhealthy may have some difficulty in tolerating the diet, but after a "considerable preliminary treatment" this disability is easily removed. That this is not the opinion of even his enthusiastic followers is evident from the letter of Dr. Bowen-Davies, who has "seen cases that cannot be put upon a purin-free diet, through inability to digest it."

Dr. Haig states that one cause of my bad results with this diet is patent because my patients failed to digest both proteids and carbohydrates. Now, he must surely have forgotten or failed to refer to my original paper, in which I clearly demonstrated that patients who could at the time of the institution of the purin-free diet digest all kinds of food without difficulty, were compelled after a variable time, never less than nine months, to relinquish the diet, however unwillingly, because of the accession of anaemia, diminished vigour and vitality, nasal catarrh, rheumatism, etc., and a recurrence of the chronic malady for which the diet had been prescribed, and which as a rule at first had been greatly relieved. In a previous letter Dr. Haig suggested that I had obtained those bad results because of a deliberate or unintentional diminution of proteid in the dietary. In my reply I dissipated this idea, contending that in each case the amount was carefully calculated according to his rules, but at the same time stating my belief that the damage was brought about because much of the proteid and carbohydrate they ingested failed to be digested, and remained in the colon undergoing putrefaction with consequent autointoxication. But this condition had not necessarily existed before they commenced a purin-free diet, and for a considerable length of time thereafter certainly did not exist, but only became evident when their vitality and powers of digestion had been weakened by a diet which, though theoretically efficient, was practically inefficient for their bodily needs. I have no hesitation in saying that the patients lost vigour as a result of their adoption of the purin-free diet under perfect conditions for testing it, and I have been greatly interested to find that since my paper was written and without any suggestion from me, my staunchest purin-free patient has quietly dropped her fleshless diet because she cannot retain her vigour upon it, even although she knows from experience she is thereby risking an attack of epilepsy.

He appears to think also that I have overlooked the fact "that there never need be more carbohydrate in a purin-free diet than in that in ordinary use." This is in reference to my own experience to cure colitis. I wonder if he will be surprised to know that I have a patient and friend who developed colitis on a purin-free diet which in my opinion contained too much carbohydrate and who is now, and has been for several years, subsisting with comfort on a vegetarian diet which contains a minimum of carbohydrate, but is by no means purin-free.

I am quite at one with Dr. Haig that excess of free purins is conducive to disease rather than to health, doubtless because of their stimulating peptogenic properties, which tend to an excessive ingestion of proteid foods, but I cannot see any reason why the bound purins in the small quantity in which they are found in our accustomed flesh foods, evidently so essential to maintain health and vigour in most people, should damage any but the most sensitive organisms, and such, of course, must be the exception.

Far be it from me to disallow the advantages of science as applied to diet, but I can hardly think that Nature should be so negligent of her duties as to compel humanity to await the results of scientific investigation on a matter so vital to its existence. Her methods of working are far different from that.

I see no reason to abandon my contention that however valuable as a method of treatment, the purin-free diet is not suited as a dietary for the ordinary purposes of nutrition in every-day life.—I am, etc.,

Birmingham, Dec. 29th, 1908. ALEXANDER BRYCE.

*** We cannot undertake to publish further letters on this subject.

The Services.

ARMY MEDICAL RESERVE.

P. C. A.—The Army Medical Reserve of Officers constituted by the Royal Warrant of 1888 was abolished by War Office Order, November 27th, 1908.

Medico-Legal.

POISONING BY FERRO-SILICON.

AN inquiry was concluded in Grimsby on December 21st, 1908, into the circumstances attending the death of five Jewish emigrants during the short sea transit between Antwerp and Grimsby. Their illness was so sudden and death so rapid that it was at first supposed that cholera might have been the cause, and appropriate measures were taken. Ptomaine poisoning was next suggested, but finally the deaths were traced to inhalation of the fumes from nine tons of ferro-silicon which the ship was carrying. This was stowed in thirty-five casks in a hold just below the cabin in which these emigrants were quartered, and on the day on which they fell ill all portholes and doors had been kept closed owing to bad weather. Evidence was given by Dr. Simpson, Medical Officer of Health for Grimsby, to the effect that *post-mortem* examination revealed symptoms indicative of death through inhalation of a poisonous gas, but no evidence of ptomaine poisoning or of any infective disease. The borough analyst said that ferro-silicon was used by steel makers and regularly imported from Belgium. It contained arsenic and phosphorus and was more liable to be affected by sea air than by land air; persons poisoned by fumes from it exhibited great thirst. On behalf of the Great Central Railway Company, to whom the ship belonged, it was stated that cargoes of ferro-silicon had been carried for many years without mishap, but some time ago it had been decided to refuse all such cargo. Acceptance of the present consignment was due to an assurance from the German manufacturers that the ferro-silicon was now manufactured by a process which eliminated all dangerous characteristics from the compound.

VALUE OF A PRACTICE.

VENDOR.—Such a practice would probably be worth from one to one and a half years' purchase.

MEDICAL ATTENDANCE ON HOTEL VISITORS.

J. B. wishes to know whether the proprietor of an hotel is not responsible for the fee if he sends for a medical man to attend to a patient staying at his hotel.

*** When an hotel keeper sends for a doctor to attend to someone taken ill at his hotel, it is presumed that he is acting as agent for that person, who is alone responsible for the doctor's fees. It would be unreasonable to suppose that an hotel keeper intended to pay the medical expenses of a stranger staying at his hotel, and before the doctor could charge him personally he would have to get a written undertaking from him to be responsible for the medical expenses if they could not be recovered from the patient.

REMOVAL OF LUNATIC.

F. H. G.—The medical man appears to us to have just grounds for complaint on account of the discrepancy between the opinion and directions of the official with whom he communicated by telephone and the statements and action of the relieving officer, more particularly as he was put thereby to considerable and unnecessary trouble. We should be glad to know what reply is received from the Asylums Committee, and the reason for refusing to return the unused certificates. In the meantime, however, we may point out that even under a summary reception order (as provided for in Section 13) this patient would probably have been sent to a workhouse pending removal to the asylum; and also that, inasmuch as the patient in question belonged, presumably, to the "pauper" class—that is, he was "in such circumstances as to require relief for his proper care"—his certification and disposal would be decided most properly by the parochial authorities.

LONG CYCLING ROUNDS.

EIGHT YEARS AN ASSISTANT asks: (1) Can an assistant be reasonably expected to cycle a round of ten or fifteen miles in the rain, on heavy roads, in an exceeding hilly country district, and this on several days a week throughout the winter? (2) Is a principal bound to provide means of conveyance for an assistant over long distances?

*** (1) A principal usually expects an assistant to do what he is in the habit of doing himself. If the round complained of is one that the principal would do himself, if he were without an assistant, there would appear to be nothing unreasonable in the latter being expected to do it. It is presumed that both principal and assistant are fairly good cyclists, and that the latter was informed at the time of his engagement that much of the work would have to be done on a bicycle. (2) Not if the distance could be reasonably done on a bicycle. In all these cases the principal must decide as to what is reasonable and what is not. If the assistant disagrees with him, he has only one remedy, and that is to terminate his engagement.

THE TITLE OF M.D.

M.D.BRUX. inquires whether it is the "correct thing" for a medical practitioner to put "M.D., M.R.C.S.," when the "M.D." is that given by the University of Brussels.

*** This has always been a point of contention in the profession, but in the light of modern decisions it would appear that there is nothing illegal in such a practice. The only instance in which this point has come before the law courts without complications was in Ellis *v.* Kelly (30 L.J., 35), where a practitioner was prosecuted for calling himself "M.D." on the strength of possessing the M.D.Erlangen, being at the same time a registered practitioner with the M.R.C.S., L.S.A. Eng. The bench of magistrates before whom the case first came refused to convict, and, on appeal, the Divisional Court upheld their decision. There are abundant precedents for the practice among men of high standing as may be seen by looking through the *Medical Directory*.

AGREEMENT TO PURCHASE A PRACTICE.

MUTANS asks for information regarding the following points as to the purchase of a practice (death vacancy): (1) Does the vendor bear the cost of the agreement and a copy for the purchaser, or is the cost shared equally? (2) On drawing up a legal agreement, what stamp, if any, is required? (3) When book debts are included in the purchase, if the purchaser does not sign the agreement till a fortnight after the death, nor assume charge of the practice for three weeks, a locumtenent of the vendor being in charge in the meanwhile, can book debts be collected in the interval by the vendor, or must outstanding debts at the death be left and turned over to the purchaser? (4) To whom belong the earnings of the locumtenent in the interval?

*** (1) The purchaser pays all the costs of the assignment of the practice, unless otherwise agreed, and in everything else the expenses are either shared between the parties equally or each pays his own costs. (2) This depends on whether there is a monetary consideration in the agreement or not. If not, a sixpenny stamp is all that is required; but if there is a pecuniary consideration the stamp must be *ad valorem*—that is, it will vary according to the amount of such consideration. (3) (4) All these points depend on the wording of the agreement, and the date of the signature is immaterial. It should be clearly stated in the agreement whether the purchaser takes the practice from the death of his predecessor or from the date of signing the agreement. The answer to the points raised will depend entirely on what was agreed to in this respect.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

DUTIES OF CERTIFYING FACTORY SURGEONS.

PIRATE.—In the instructions issued by the Secretary of State to certifying factory surgeons it is stated that "the duty assigned to the certifying surgeon in respect to an accident will not authorize any interference with the medical or surgical treatment of the person injured." It is not uncommon, however, for the factory surgeon to fill other duties at a works, for which he gets separately remunerated, and it appears possible that some such arrangement might have been the reason for the action of the particular factory surgeon alluded to. Our correspondent should ascertain in what capacity the certifying surgeon acted.

CERTIFICATES FOR INSURANCE PATIENTS.

POLICY writes that he attended a poor patient with cancer for some months, and has since been asked by a relative who insured the deceased to inform the insurance company how long the patient had been ill. This he declined to do on the ground that no medical examination having been made he thought the insurance company should pay for the information. He asks for advice as to the proper course to pursue with due consideration for the interests of the relatives who he believes have acted in good faith. The parties concerned are very poor, and unable to pay any adequate fee for a certificate.

*** It is true that some industrial insurance companies take no precautions to ascertain that the person is in good health when insured and accept policies through their agents, which are illegal on account of the absence of "insurable interest," but if they will not pay the claim without obtaining certain information, the medical attendant must remember that if he refuses to give it to a duly authorized person, the family and not the company suffer.

THE RELATION OF MEDICAL PRACTITIONERS TO ADVERTISING INSTITUTIONS.

Z. asks: What is the exact medico-ethical position of: (1) A practitioner who holds the post of consulting physician to an institution which advertises cures by light or radiant heat? (2) The consultant to establishments for the cure of obesity, intemperance, morphinism, etc.? (3) To those employed as medical advisers by patent medicine vendors?

*** No general rule can be laid down with regard to the first and second queries except that the advertising should be confined to the medical press or to circulars in prospectuses sent to the medical profession. With regard to the third question, in our opinion a medical practitioner who accepts such a position must be indifferent to any consideration of medical ethics.

MEDICAL ADVERTISING.

A correspondent sends us a handbill and a small poster advertising a smoking concert to be held by the "Victoria Cross Tradesmen's Society," which is apparently a provident institution to provide medical attendance, sick pay, and life insurance "for the small cost of 4s., or less than a penny a week," and the medical adviser's name is printed on both.

*** This is on all-fours with a case brought before the General Medical Council in November, 1900 (Minutes of the General Medical Council, vol. xxxvii, p. 119), which ended by the defendant severing his connexion with the institution. It ought to be generally known that such advertisements of clubs and benefit societies are not permitted.

CANVASSING.

Quaero writes: "A. B. having taken a house in an outlying part of a town where resident doctors are scarce and the population poor, has employed a man to canvass for him to get members of a weekly payment medical club. The canvasser has instructions not to canvass persons who are in a similar club belonging to X. Y. who lives at a distance, but keeps a resident assistant in the neighbourhood where A. B. lives. Is A. B. acting in any way unprofessionally, or so as to exclude him from membership of the British Medical Association?"

*** Canvassing is distinctly contrary to the resolution of the General Medical Council dated December 1st, 1905, by which the profession were warned that canvassing renders the practitioner resorting to it liable to be charged with infamous conduct in a professional respect, and we think that it would be a bar to membership of the British Medical Association if the facts were brought to the notice of the body asked to elect.

PROFESSIONAL SECRECY.

H. A. L. writes: "A. is consulted by B., a nurse who has acquired the morphine habit. B. is a member of a nursing organization but is not at present on duty. She is anxious to break off the habit, but will not consent to the secret being divulged. What is A.'s duty—(1) respecting the secret; (2) respecting the treatment; (3) respecting B.'s work?"

*** (1) It does not appear in any way to be A.'s duty to violate the established rule of professional secrecy. (2) He should carry out the treatment to the best of his ability. (3) He should advise B. to give up her work while under treatment as it is difficult to believe that it would be successful unless she were under control.

GRATUITOUS ATTENDANCE ON DOCTORS.

H. C. M. (Jersey) writes: Perhaps you may be willing to allow me a few lines in relation to the matter under the above heading in the British Medical Journal of December 26th, 1908. I have, indeed, no desire or intention to discuss the principles involved, especially having regard to the fact that the views expressed editorially in the Journal upon so many occasions, in response to appeals, have been, I think, we should all consider eminently reasonable, as well as fair and just to all concerned. Also because, with some knowledge of our profession to guide me, I venture to hold that, among our many failings, want of generosity towards each other in sickness or accident is *not* one that can with justice be brought against us. I think, however, it may not be without interest to recall how a celebrated physician of the past—I believe Dr. William Abercrombie—acted upon an occasion in which, as he considered, no doubt or difficulty arose upon the question of fee. The little incident was one which that good man and excellent practitioner of the old school, the late Dr. William Dumbreck, of Edinburgh, was fond of narrating to his pupils. It appeared that Dr. Dumbreck, early in his career, had occasion to consult Dr. Abercrombie about himself, and at the conclusion of the consultation ventured, though with some diffidence, to suggest a fee. Said the great man, turning upon his young *confrère* with kindly indignation, "What, sir! What, sir! offer me a fee! Do you think me a cannibal, preying upon my own flesh and blood! Do you think me a cannibal?"

THE ARMS OF THE UNIVERSITY OF EDINBURGH.

M. I.—Stationery bearing the arms of the university is commonly sold in Edinburgh for the use of students, and by no means implies that the user is a graduate. There is, however, a distinction between the use of it in Edinburgh and elsewhere, especially in the case of a non-graduate, but it is possible that in this case the individual is merely using what is left of a supply purchased in Scotland.

Universities and Colleges.

UNIVERSITY OF OXFORD.

The following degrees have been conferred in Medicine and Science:

D.M.—H. W. Kaye, Magdalen.
D.Sc.—H. L. Bowman, New.
B.M., B.Ch.—M. Davidson, Trinity; H. E. Gibson, Queen's; G. D. H. Carpenter, non-collegiate; J. F. Hornsey, Wadham; H. M. C. Green, Wadham; O. L. V. S. de Wesselow, Corpus Christi.
B.Sc.—M. Sopote, non-collegiate; H. E. Cocksedge, Keble.

UNIVERSITY OF LONDON.

Meeting of the Senate.

A meeting of the Senate was held on December 16th, 1908.

Recognition of Teachers.

The following were among those recognized as teachers of the university in the subjects and schools indicated:

King's College.—Dr. St Clair Thomson* (Laryngology).
Middlesex Hospital.— Dr. Victor Bonney (Midwifery and Diseases of Women); Dr. John Cameron (Anatomy).
London School of Medicine for Women.—Dr. E. F. Buzzard (Pathology); Miss Mabel E. Gates (Anaesthetics); Dr. T. B. Hyslop (Mental Diseases); Mrs. Florence E. Willey (Midwifery and Diseases of Women).
St. George's Hospital. — Mr. Thomas S. Kerr (Tropical Medicine).
London Hospital.—Dr. Wilfred J. Hadley* (Medicine); Mr. Jonathan Hutchinson* (Surgery); Dr. Wm. Wright (Anatomy).
St. Mary's Hospital.—Mr. C. Irving Graham (Laryngology); Dr. G. William Hill (Laryngology).
National Hospital for the Paralysed and Epileptic.—Mr. T. Grainger Stewart (Clinical Medicine).

Registration of Internal Students.

It was resolved that the following be added to the end of the note on page 3 of the Red Book, September, 1908:

> Students whose names have been returned by the authorities of a school or institution as having discontinued attendance at an approved course of study and whose names have consequently been removed from the register of internal students may be re-registered, after notification by the authorities of a school or institution that they have resumed an approved course of study. Fees payable in respect of late applications for re-registration will be on the same scale as those payable in respect of late applications for registration.

Regulations as to Approved Courses of Study.

It was resolved that Section 12 of the General Regulations as to approved courses of study (Red Book, September, 1908, p. 7) be amended to read as follows:

> A student's attendance at an instruction course as prescribed under Regulation 6 may be exceptionally relaxed with the approval *of the Academic Council and* of the school or institution to which he is attached, provided that (*a*) his attendance for the whole course of study does not fall below the minimum prescribed in the schedule to these regulations, if any, and (*b*) his attendance at the instruction course, though not satisfying the requirements contained in Regulation 6, is in the opinion of the certifying authority sufficient for the student in question. *Applications for exemption under this regulation must be made not later than the end of the first term of the session in respect of which such exemption is desired.*

(The amendment consists in the words printed in italics.)

Regulation for the B.Sc. (Honours) Degree for Internal Students.

It was resolved that the following be inserted in the regulations for internal students after the fifth paragraph under the heading "B.Sc. (Honours) Degree" (Red Book, September, 1908, p. 198), and after the second paragraph on page 64:

> Students who have taken the B.A. (Honours) degree in mathematics as internal students, and have passed the Intermediate Examination in Science for internal students, will not be required to pursue any further approved course of study before being admitted to the B.Sc. (Honours) Examination in mathematics as internal students.

Regulations for the Matriculation Examination.

It was resolved that the regulations for the Matriculation Examination be amended in the following particulars (*Calendar*, 1908-9):

(*a*) Page 241, line 1, omit the words "from the list."
(*b*) Page 241, omit the starred languages.

*Application made in view of change of status of applicant.

(*c*) Page 241, after the words "elementary biology-zoology" insert the following:

A candidate desirous of offering any language or languages other than those named above should submit his proposal for the consideration of the Matriculation Board. The normal notice of such proposal is six months before the beginning of the matriculation examination for which he enters. Candidates giving less than six months' notice are advised that it may not be possible to make arrangements for papers to be set at the next matriculation examination even though the language be approved.

Proposals to take a particular language, other than those mentioned above, must be accompanied by a special fee, additional to the regular matriculation fee of £2. This fee will be returned should the proposed language not be accepted by the Matriculation Board, but in no other case. The amount of this additional fee varies with the language selected, and can be ascertained on application to the External Registrar.

(*d*) Pages 243-4 omit the syllabuses of the examination in Spanish, Portuguese, Italian, Modern Dutch, Arabic, Hebrew, Sanskrit, and Chinese.

Military Education Committee.

A committee was appointed to control, under the direction of the Senate and in accordance with the War Office Regulations, the university contingent of the Officers' Training Corps.

Appointments.

Sir William Collins, M.D., M.S., M.P., was appointed a member of the University College Committee for the remainder of the period 1908-9, vice Dr. S. Russell Wells, resigned.

Dr. Frederick Taylor was appointed a member of the council for external students for the remainder of the period 1908-9, vice Mr. Mackinder, M.A., resigned.

Sir William H. Allchin was reappointed a governor of the Maidstone Grammar School.

The Senate have, at the request of the Kent Education Committee, nominated Dr. W. B. Warde (Tunbridge Wells and Southborough) a member of the local Higher Education Subcommittee.

Gilchrist Studentship for Women.

The Gilchrist studentship of £100, tenable for one year by a graduate of the university who is prepared to take a course of study in an approved institution in preparation for some profession, will shortly be awarded. Applications must reach the Principal not later than February 28th, 1909.

Advanced Lectures in Physiology.

The following courses of advanced lectures in physiology will be delivered during the second term:

1. Eight lectures on the chemistry of food by S. B. Schryver, D.Sc., Ph.D., at University College on Fridays at 5 p.m., commencing on January 22nd.

2. Four lectures on some practical methods employed in physiological chemistry by R. H. A. Plimmer, D.Sc., at University College on Wednesdays at 5 p.m., beginning on February 3rd.

3. Two lectures on the evolution of function in the human brain in relation to structure by Dr. F. W. Mott, F.R.S., at King's College on Mondays at 4.30 p.m., beginning on February 8th.

4. Eight lectures on the regulation of body temperature by Dr. M. S. Pembrey, M.A., at Guy's Hospital Medical School on Thursdays at 4 p.m., beginning on January 14th.

5. Eight lectures on prophylaxis against infection by Dr. W. Bulloch at the London Hospital Medical College on Fridays at 4.30 p.m., beginning on January 15th.

Courses 1, 4, and 5 have been recognized by the Senate as courses of advanced lectures which a candidate at the B.Sc. (Honours) examination in physiology may name for part of his practical examination.

The course of four lectures on the secretion of urine by Professor T. G. Brodie, M.D., F.R.S., originally announced for the second term, has been postponed to the third term, and will be given at King's College on Mondays at 4 p.m., beginning on June 7th.

Advanced Lectures in Zoology.

The following courses of advanced lectures in zoology have been arranged for the second term:

1. Three lectures on the anatomy and zoological relation of the anthropoid apes, by Dr. Arthur Keith, to be given in the theatre of the Royal College of Surgeons, Lincoln's Inn Fields, on January 15th, 21st, and 29th, at 5 p.m.

2. Two lectures on problems of lake fauna, with special reference to the lakes of Africa, by Dr. W. A. Cunnington, B.A., Ph.D.; details of time and place to be announced later.

The lectures are addressed to advanced students of the university and others interested in the subjects dealt with; admission free without tickets.

Chadwick Lectures on Hygiene and Municipal Engineering.

Dr. Louis C. Parkes will deliver at University College the courses of three Chadwick lectures on the medical aspects of recent advances in hygiene as connected with sewering on Tuesdays at 4 p.m., beginning on February 2nd.

UNIVERSITY OF EDINBURGH.

ANNUAL REPORT FOR 1908.

Number of Students.

DURING the past year the total number of matriculated students (including 595 women) was 3,328, being 48 more than the number for last year, and the highest number reached for seventeen years. Of these 1,156 (including 505 women) were enrolled in the Faculty of Arts, 295 (including 16 women) in the Faculty of Science, and 1,490 (including 59 women) in the Faculty of Medicine. Of the students of medicine, 667, or nearly 45 per cent., belonged to Scotland; 281, or 19 per cent., were from England and Wales; 132 from Ireland; 76 from India; 306, or about 20½ per cent., from British colonies; and 28 from foreign countries. These figures show that the proportion of non-Scottish students of medicine is well maintained; and it is worthy of note that the number of Colonial students exceeds by 34 the highest number reached at any time during the last twenty years.

Degrees Conferred.

The following degrees were conferred during 1908: Master of Arts (M.A.), 182 (including 92 women); Bachelor of Science (B.Sc.), 47 (including 4 women); Doctor of Science (D.Sc.), 4; Bachelor of Medicine and Master in Surgery (M.B., C.M.), 4; Bachelor of Medicine and Bachelor of Surgery (M.B., Ch.B.), 184 (including 19 women); Doctor of Medicine (M.D.), 76 (including 3 women).

The General Council of the University now numbers 10,579.

Fellowships, etc.

The total annual value of the University Fellowships, scholarships, bursaries, and prizes now amounts to about £18,650—namely, in the Faculty of Arts, £11,045; in the Faculty of Science, £1,545; and in the Faculty of Medicine, £3,730. A number of bursaries are in the gift of private patrons, but the great majority of the university bursaries, prizes, etc., are awarded by the Senatus after competitive examination. In addition to the above, a sum of upwards of £660, being the income of the Earl of Moray Endowment Fund, is annually available for the encouragement of original research.

Lectureships, New Courses, etc.

New lectureships have been instituted by the University Court as follows: Mr. R. Stewart MacDougall has been appointed Lecturer in Botany, to give courses of instruction in that subject to men and women students of arts and science. Mr. J. E. Mackenzie, D.Sc., has been appointed to deliver a course of lectures on chemistry to women students in the faculties of arts and science; while Mr. A. C. Cumming, D.Sc., has also become a lecturer in the department of chemistry. The University Court has instituted a lectureship in the history of medicine, and Mr. J. D. Comrie, M.A., B.Sc., M.D., who has been appointed lecturer, is expected to deliver part of the first course before the end of the present winter session, and the remainder in the summer session. Dr. G. M. Robertson has been appointed joint lecturer with Dr. T. S. Clouston in mental diseases. Lastly, Messrs. J. M. Cotterill, M.B., C.M., F.R.C.S.E., and J. W. B. Hodsdon, M.D., F.R.C.S.E., have been appointed Lecturers on Clinical Surgery.

Early in the year several special short courses of lectures were given—one on Sugars; another on The Synthetic Dye Stuffs, by Dr. J. E. Mackenzie; Heredity, by Dr. F. H. A. Marshall; Protein Metabolism, by Dr. W. Cramer; Chemistry of Colloids, by Dr. W. W. Taylor; Physiological Aspects of Immunity Problems, by Dr. James Ritchie; Sensory Conduction in Cord, by Dr. Sutherland Simpson.

Personal Changes.

The vacancy caused by the death of Professor Annandale in December, 1907, was filled in June by the appointment of Mr. Francis M. Caird, M.B., C.M., as Regius Professor of Clinical Surgery. At the close of the summer session Professor Crum Brown, then the senior member of the professoriate, resigned the Chair of Chemistry, and was succeeded by Mr. James Walker, D.Sc., Ph.D., formerly Professor of Chemistry in University College, Dundee. Numerous changes in the staff of lecturers, in addition to those already noted, have occurred. Mr. J. W. Bews, M.A., B.Sc., has been appointed lecturer on plant physiology, in room of Dr. A. W. Borthwick. Dr. Harold Pringle succeeds Dr. P. T. Herring, and Mr. W. A. Jolly, M.B., Dr. Sutherland Simpson, as lecturers on histology and experimental physiology respectively. Dr. G. H. Melville Dunlop is successor to Dr. T. M. Burn Murdoch in the lectureship on diseases of children; Major D. G. Marshall, M.B., I.M.S., succeeds Brigade-Surgeon Lieutenant-Colonel James Arnott as lecturer on diseases of tropical climates; and Dr. Alexander James, Dr. J. O. Affleck, as lecturer on infective fevers.

Structural Changes.

Further progress has been made in adapting to other purposes the rooms in the old buildings vacated by the Natural Philosophy and Engineering Departments on their removal to the new laboratories in Infirmary Street. The upper floor of the old Natural Philosophy Department has, by the elevation of the roof, afforded three good class-rooms, and a women students' reading-room, for the joint use of the Mathematics and Geography Department, and also for teaching military subjects. A handsome room, long used in connexion with the Zoology Department, has been adapted so as to meet a much-felt want by providing a second examination room. An additional room in the new Natural Philosophy building has also

been obtained for the practical training of teachers in Physics. The Dunlop Scholarship Fund has increased so as to permit of the institution of an additional scholarship in the faculty of medicine. There are now twenty-four scholarships in all on this foundation, each of the annual value of about £100.

Additions to the Library.

Additions to the University library for 1908 numbered 6,182.

Benefactions, etc.

By the scheme of allocation lately intimated by the Carnegie Trust for the second quinquennial period provision is made towards certain of the needs of the university, especially in regard to the endowment of lectureships, the purchase of books for the library, buildings, permanent equipment, and apparatus. The Right Hon. William M'Ewan, LL.D., has given a sum of £5,450 as an endowment for the expenses of upkeep of the M'Ewan Hall. A grant of £400 has been made by the Combe Trustees, in addition to sums already given, for the purchase of apparatus in connexion with the George Combe Lectureship in General and Experimental Psychology.

Faculty of Medicine.

Several important changes have been made in connexion with the new regulations for graduation in medicine and surgery, which were passed in 1907. The classes in the Faculty of Medicine now open at the beginning of October, instead of, as formerly, about the middle of that month; degree examinations in all the subjects now take place in December; and a graduation ceremonial will be held before Christmas. Accommodation was again given in September, for a scheme of post-graduate courses in medicine, held under the joint auspices of the university and the Royal College of Physicians and Surgeons, and both of these schemes proved highly successful.

DEGREES.

THE following degrees were conferred on December 19th, 1908:

M.B., CH.B.—Girdhari Lal Batra, H. Blyth, J. Brander, J. A. Browne, B.A.; H. Burns, E. Cansfield, J. A. R. Cargill, G. H. Lart, Margaret E. Davidson, J. T. Dickson, W. J. Duncan, W. G. Evans, Helen Forbes, P. J. F. Garvey, H. R. B. Gibson, A. B. Gordon, W. B. Grant, G. R. Gray, R. D. L. Greene, J. A. W. Hackett, J. K. Hamilton, M.A.; St. G. M. L. Homan, H. Hutson, W. P. S. Johnson, E. W. Kirk, F. R. Laing, J. Langwill, C. L. Laurent, J. S. Levack, N. F. Lloyd, C. L. Louw, Margaret M'Cahon, J. V. MacDonald, R. MacDonald, G. D. M'Iver, W. J. M'Keand, D. L. M'Kenna, Ada J. Macmillan, H. D. M'Phail, M.A.; W. J. F. Mayne, A. F. Miller, J. Montgomery, K. Nehru, N. S. Neil, C. T. H. Newton, J. G. Nicholson, M.A.; E. F. W. Nixey, P. G. Palmer, M. D. Rees, D. Ross, Marguerite Ross, D. H. Russell, E. W. Smerdon, H. M. Spoor, L. D. Stephen, W. Stobie, E. A. Strachan, Alice M. Thompson, N. G. Thornley, Helen M'G. Wakefield, W. H. te Water, A. White, R. C. Wuppermann.

UNIVERSITIES OF MANCHESTER, LEEDS, AND SHEFFIELD.

JOINT MATRICULATION BOARD.

THE Joint Matriculation Board of the four universities of Manchester, Liverpool, Leeds, and Sheffield has just issued its report for the year 1908. The board conducts the matriculation examination on behalf of the four universities, and in the past year for the first time the examination has been held under the supervision of education authorities at eight local centres, at which 127 candidates presented themselves. The examination was also taken as a form examination at 28 schools. The total number of candidates at the July examination was 1,695, against 1,294 in the previous July, while in September the number was 519, against 438 in the previous year. As many candidates take the examination a year before they leave school, those who hold the certificates are now allowed to present themselves in a few subjects at the higher standard for supplementary certificates. On behalf of the education committees of Lancashire and Cheshire, the Board has conducted examinations for the award of senior exhibitions and intermediate scholarships offered by these committees. It has also formulated a scheme, which has been accepted by the four universities, for the inspection and examination of schools. The offices of the board have now been removed from Owens College to premises in Dover Street, which is close to the college.

Obituary.

CHARLES COPPINGER, M.D., F.R.C.S.I.,

EMERITUS PROFESSOR IN THE CATHOLIC UNIVERSITY MEDICAL SCHOOL, DUBLIN.

WE have to record with very much regret the death of Mr. Charles Coppinger, which occurred in Dublin last week, after a very long period of defective health.

Mr. Coppinger was Surgeon to the Mater Misericordiae Hospital until a few years ago, when he retired from that position. He was also Professor of Physiology in the Catholic University Medical School, and on retiring from his work there he was appointed Emeritus Professor of the Institutes of Medicine. For some years he was a Fellow of the Royal University, and an Examiner in Physiology in that institution. In the Mater Hospital Mr. Coppinger was for many years a most successful operator, and an energetic and popular clinical teacher. He was one of the few men who have successfully tied the innominate artery. He also did a great deal of very successful joint surgery. In earlier days he was a well-known microscopist. He was a thorough and devoted worker, but for some time he had practically retired owing to continued ill-health. He was naturally of gentle and retiring disposition, but his work was sound and advanced, and he merited greater prominence in his profession than he attained. His pupils and the other friends whom he attached by his kindliness and professional knowledge and skill will learn of his death with extreme regret.

Mr. Coppinger, who was unmarried, qualified in 1869. He subsequently became a Fellow of the Royal College of Surgeons and M.D. of the Royal University.

CHARLES KNOTT, M.R.C.P.EDIN.,

PORTSMOUTH.

ON December 29th, 1908, Dr. Charles Knott, of Portsmouth, passed peacefully away. On Christmas Eve he had an apoplectic seizure, and in the intervening days did not recover consciousness. He had been out of health and even ill for some time past, so that his death was not entirely unexpected; nevertheless, its occurrence has been a shock to a locality in which he was as well known as he was highly esteemed, and will be the cause of deep and lasting regret to many in Portsmouth and elsewhere. He received his medical education at Guy's Hospital, becoming M.R.C.S.Eng. and L.R.C.P.Edin. in 1872, being admitted later on to the membership of the latter college. He settled in Portsmouth immediately after receiving his first diploma, and remained steadily at work in the district until late last year, or, in all, for a period of thirty-six years. During the whole of this time he was closely connected with the Poor-law work of Portsmouth, first as a Parish Medical Officer, and for the last twenty years as Medical Superintendent of the workhouse and its infirmary. When he first took over the latter institution it was a workhouse infirmary of the ordinary type of the time, and by no means realized Dr. Knott's conception of what an infirmary should be. He therefore set to work to bring about reforms, and long before he died had been rewarded by a great measure of success, the nursing school which he organized and controlled at the infirmary being of great advantage to the inmates of the infirmary and a credit to Poor-law nursing in general. Poor-law work, however, was by no means his only occupation; he also carried on a large and successful general practice, and held many appointments.

Among other things, he was Chairman of the Portsmouth Centre of the St. John Ambulance Association, a Lecturer to the same body, Medical Referee of Her Majesty's Customs Fund, Medical Officer of Health for Langport and to the Portsea Union House and Schools, and also held until last year a commission in the 3rd Volunteer Battalion of the Hampshire Regiment. He joined this force in 1882, raised and trained an excellent bearer company, received the Volunteer Decoration, and eventually became Surgeon-Colonel, retiring on the transformation of the battalion into the 6th Hampshire Territorials. His connexion with the St. John Ambulance Association was also long, and his services to it so marked that a few years ago he was honoured by being appointed a Knight of Grace.

For several years he held a seat on the Portsmouth School Board, and throughout his career exhibited a constant interest in children. His sympathy with young people may, indeed, be regarded as one of his strongest characteristics, and it was, perhaps, as much for their sake as in honour of Charles Dickens—whose birthplace was Portsmouth—that he set himself to work on a task the achievement of which he regarded with great satisfaction—namely, the raising of a fund for the maintenance of the "Tiny Tim" bed at his old hospital, Guy's.

Popular as was Dr. Charles Knott with the general public, he was equally esteemed by his professional brethren, and some eight years ago, when the British Medical Association held its annual meeting in Portsmouth, he was President of the Southern Branch. He was, indeed, one of the original members of this Branch, and maintained his interest in the affairs of the Association right up to the end.

DR. G. P. M. WOODWARD, who died recently at Sydney, was the son of the late Mr. Wm. Woodward, of Clough Prior Castle, co. Tipperary. He obtained the diploma of L.R.C.S.I. in 1850, and that of L.R.C.P.I. in the following year, taking the Fellowship of the Royal College of Surgeons in Ireland in 1879. He joined the Ordnance Department of the army in 1851, and in December, 1858, was promoted surgeon from the Royal Artillery, with which regiment he had served in the Crimea, including the siege and fall of Sebastopol, receiving a medal with clasp, and the Turkish medal. Dr. Woodward again saw active service, this time with the Royal Horse Artillery, during the Indian Mutiny in pursuit of Tantia Topee in Central India in 1858–9, for which he received a medal; he also held the medal for service throughout the Abyssinian campaign of 1867–8 as a staff surgeon in charge of the hospital ship *Mauritius*. He retired with the honorary rank of Deputy Surgeon-General in 1877. Dr. Woodward went to Australia, and about 1882 joined the medical staff of the railways, with which he retained connexion until his death. The railway department was well represented at the funeral on October 6th.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. M. N. Popoff, Professor of Neurology and Psychiatry in the University of Tomsk; Dr. D. J. Kurajeff, Professor of Medical Chemistry in the University of Charkoff; Dr. Epiphanio Marques, Emeritus Professor in the Medical Faculty of the University of Coimbra, Portugal, administrator of the hospitals of the university, and author of some works on medical subjects; Dr. E. Delbet, Member of the Chamber of Deputies for the Seine-et-Marne; and Dr. René Blache, Member of the Académie de Médecine, General Treasurer of the French Medical Association.

Public Health
AND
POOR-LAW MEDICAL SERVICES.

SANITATION IN THE COUNTY OF DURHAM.

ALTHOUGH county councils possess very little active power over defaulting sanitary authorities, they are armed with means for putting into action the powers of the Local Government Board. Complaint may be made by a county council under Sec. 299 of the Public Health Act, 1875, if in the opinion of the council an authority is not providing its district with sufficient sewers, is not maintaining those which do exist, is not providing a sufficient water supply, or in other ways is not enforcing the provisions of the Act of 1875. Very few county councils have taken advantage of this section, and some of those who have seem to have met in some instances with only scanty support from the central authority.

The county council of Durham was among the first to use the section for the purpose of hastening public health reforms within the county, and, in spite of rebuffs, is continuing this course of action. The recently issued report to the Local Government Board of Dr. R. J. Reece gives an account of the circumstances which induced the county council to make complaint in July, 1906, of the default of the Hebburn Urban District Council. During the two years which had elapsed between the date of the complaint and the inspection of the district by Dr. Reece, a certain amount of activity had been displayed by the district council, so that he had principally to inquire into the default of the council in not putting into force its powers with respect to insanitary houses and out-offices. In 1901 there were 2,784 houses in Hebburn, and of these nearly 700 are owned by the Hebburn Colliery Company. It is with these last, of which about 150 are said to be in an insanitary condition, that the greatest difficulties have arisen. The cost of working the collieries is very great, on account of the large amount of pumping necessary, and the thicker seams of coal are getting exhausted. No dividends have been paid to the ordinary shareholders, and at any time the directors may consider the desirability of closing the colliery. The company's houses are occupied by the colliers rent free, and if they are turned out of the worst houses the company would be required to pay a rent allowance, amounting in the aggregate to £1,000 per annum, in accordance with the custom in the Durham coalfields. The question of improved dwellings is thus complicated in a manner not to be found except in the coalfields of Durham and Northumberland; but there can be no doubt that the inspection which has been made by Dr. Reece and the report which has resulted from that inspection will go some way towards creating improved conditions, for it is written in a most reasonable and judicial spirit, which cannot fail to be appreciated by those who are most intimately concerned in the welfare of the district.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL
CHANGE OF ADDRESS.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL have been removed to 429, Strand.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—
EDITOR, 2631, Gerrard. GENERAL SECRETARY AND MANAGER, 2630, Gerrard.
MEDICAL SECRETARY, 2634, Gerrard.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

W. B. would be glad of references to papers giving most up-to-date information as to the treatment of phthisis by tuberculin, by cinnamate of sodium, by serums, and by graduated exercise, as at the sanatorium in connexion with Brompton.

DIRTY HEADS AND FOOD FACTORIES.

TRANSFORTHANA writes: As a medical inspector of public schools I have, in common with others, had an eye-opener regarding the prevalence of lice and nits in girls' heads. I am a M.O.H. and an inspector of factories. In one, where food products are made, many "young persons" are employed. Is it my duty to examine these girls' heads; and if lice and nits are found, ought I to reject the candidates? The factor does not consider himself "responsible for the health of the girls in his employ," but expects the M.O.H. to do what is "right and necessary under the Act."

TYPHOID FEVER AND INTESTINAL INFECTIONS.

DR. C. L. FRASER, F.R.C.P., F.R.C.S.Edin. (Berwick-on-Tweed), writes: During the past year it has been my fortune to meet with several cases which presented all or nearly all of the characteristic symptoms of enteric fever. The clinical picture in each instance was as nearly perfect as it is possible to portray the disease, and speaking clinically no doctor of average observation would doubt that he was dealing with it. The roseolous rash was present in two. Yet, on the blood of these patients being submitted for examination at various periods in their course the result was given negative to my very great surprise, because the disease was most manifestly a bacterial infection of the intestinal tract. Does this test hold good only for infection by Klebs bacillus? Are there not other infections of the tract equally dangerous? I am strongly inclined to this belief and since having had my faith in the test thus rudely shaken have read with much profit a work by Professor Hester entitled, *The Common Bacterial Infections of the Intestinal Tract and the Intoxications arising from them*. I think the full scope and limitations of this test should if possible be laid before the profession by some eminent authority. I lately had the opportunity of discussing this matter with a medical officer of health of a large Indian city in which enteric fever is ever present. He informed me that quite a number of cases were reported which also would not react to Widal's test, but those who reported them entertained no doubt as to the character of the disease. In my own cases both typhoid and paratyphoid were set aside, and yet a dangerous infection was present from which one patient died. I am seeking for information and would ask any practitioner who has had similar experience to express himself.

Forensic Aspects of Menstruation and Pregnancy.

Dr. Horace G. Cole (Liverpool) writes: Apropos of your article in the Journal of December 12th, 1908, some of your readers, especially those of a psychologically obstetrical turn of mind, might be interested in a case which I am attending. The patient is a healthy woman, aged 33, who has been married nearly a year. Before marriage the catamenia were regular, painless, usually lasted a week, and were unaccompanied by any special psychoses. Before marriage took place it was noticed that the lady became irritable at times. This irritability did not incapacitate her for work, and, indeed, would not be noticed except by those with whom she was very intimate. Ten days after marriage the patient became quite choleric, the fit of angry temper being occasioned by some trifling matter. A week later she menstruated. The same thing—that is, irritability of temper—happened the next three times in each case a week previous to menstruation. Three weeks after the last period she spent the greater part of the night in a nearly hysterical condition. She absolutely refused to give any reason for her lacrymation. She did not menstruate that month, nor has she done so since. She is expecting her confinement shortly. With the exception of psychical disturbances, pregnancy has run an uninterrupted and typical course; but in regular periodicity these cerebral explosions have taken place. If the patient recollects beforehand, she is able to conquer her animosity to her husband, but, instead, becomes intensely miserable and cries for days at times. At the last attack, during her husband's absence, she had a great desire to open a vein with a pair of scissors—she could think of no other way of getting rid of herself—but decided it might hurt! This has been the only suggestion of suicide in the case. The above data were given to me by the husband; but he seems a very observant man, and there is no reason to doubt his veracity. Both he and his wife seem greatly attached to one another, and he is anxious about the future. I should be glad if readers would offer some suggestions as to treatment.

Income Tax.

Taxpayer writes, with reference to an answer given to him in the British Medical Journal for December 12th, 1908: If profits of practice are, say, £410, there is an abatement on £150 of this. If in addition to this there is private income of, say, self £200, and wife £50 (all of which £250 has already had tax deducted before dividends are received), the total income is assessed at £410+£200+£50=£660, and abatement allowed only on £70—(1) Is this assessment correct? (2) Or can abatement on £150 be properly claimed? or (3) return of tax on the £250 private income be properly claimed? and (4) in case of either (2) or (3) how long after assessment can claim be made by the taxpayer, and what arrears of charges can be recovered?

*** (1) The correct assessment is £410, less £70 abatement—that is, £340. The answers to the remaining questions are: (2) No. (3) No. (4) No reply is necessary.

Hirudo writes: Can I appeal against my assessment on the ground that my income for the three previous years has not been taken into account? I am now assistant at £200 a year, and my income up to April, 1909, was returned as that, but previously my incomes as house-surgeon, locum, etc., were £60, £100, £75, an average of £78⅓ per annum. . . . Is it worth while appealing, apart from the fact that only 30s. is in question?

*** The time for objecting to the assessment has gone by, and, unless the Commissioners are willing to hear an appeal, our correspondent is out of court. If the Commissioners permit an appeal to be made, the question raised is one for them to determine. It is probable that they would allow the average to be taken as claimed by our correspondent. If, however, they take the opposite view, the case does not appear to be of sufficient importance to make it worth while to contest the decision of the Commissioners in the High Court.

ANSWERS.

R. S. H.—A lecture by Dr. G. E. Herman in which the treatment of retroversion and retroflexion of the gravid uterus was discussed appeared in our issue of April 16th, 1904.

Fleet Surgeon.—In normal vaccinia there is no material present that clinically would be called pus. The contents of the vesicle may become puriform by the accidental access of extraneous organisms, but the observance of the simple precautions now universally enjoined easily obviates this. An account of the histological appearances in the vaccine vesicle and the chemistry and morphology of vaccine lymph is given in *Vaccination: Its Natural History and Pathology*, by Dr. S. Monckton Copeman (London: Macmillan and Co., 1899, 6s.).

Lectures to Probationer Nurses.

Infirmarius.—The best way of preparing a syllabus for a course of lectures to probationer nurses would probably be to get a good elementary textbook on physiology and another on nursing and look through them, as there does not seem to be any outline of such a course published. The following works might be consulted: Meachan's *First Stage of Human Physiology* (London: W. B. Clive, University Tutorial Press); Lewis's *Nursing: Its Theory and Practice*, eleventh edition (London: The Scientific Press, 2s. 10d. net.); Foster and Shore's *Physiology for Beginners* (London: Macmillan and Co., 1894, 2s. 6d.); and Miss Lücke's *General Nursing*, sixth edition (London: Kegan Paul, Trench, Trubner, and Co., 1906, 5s.).

Nicotine and Tobacco.

A. N.—The figures given in reply to "J. F. M." (British Medical Journal, December 19th, 1908, p. 1848) for the percentages of nicotine in tobacco (1.5 to 8 per cent.), were collected from results published by different workers at various times. The figure 1.5 was taken from a series of analyses of different tobaccos made in Italy some years ago; the actual figure given was 1.62 per cent. on the *dried* leaf, and as the leaf may contain anything up to 35 per cent. of moisture, this would give 1.5 or less per cent. on the air-dry tobacco; the only information given about this sample is that it was Havana tobacco. This is in agreement with such results (few in number) as have been obtained by our analyst, who has found much less nicotine in cigars than in pipe tobacco. The subject, however, would require further investigation before any general statement could be made.

Treatment of Follicular Stomatitis.

Dr. R. M. Fraser (Belfast) writes: The condition to which "W. M." has drawn attention, though not excessively rare, is not mentioned in any literature I have consulted. I should feel obliged if "W. M." would supplement his description by stating whether a vulcanite dental plate is worn, and, if so, is it kept in night and day? and also, in reference to the vulvar condition, whether a pessary is worn. In a patient of my own I made, without success, an attempt to make a culture from a vesicle. Perhaps some dental practitioner could throw light on the matter as to whether it is due to some susceptibility to rubber. Drugs appear useless.

LETTERS, NOTES, ETC.

A Warning.

Dr. A. G. Bateman (General Secretary, Medical Defence Union, 4, Trafalgar Square, W.C.) writes: May I ask, through your columns, medical practitioners who may be applied to for pecuniary or other assistance by a person calling himself "Dr. J. Backus Taylor, M.R.C.S., L.R.C.P.," not to grant any such aid without first communicating with me? Medical agents should also guard themselves in a similar manner before placing the name of this person upon their lists for employment as assistant or locumtenent and sending him to clients. There is a Dr. Backus Taylor upon the *Medical Register*; but from circumstances which have come to my knowledge it would be as well not to assume that the individual of whom I write is the qualified practitioner of that name in the *Register*. I shall be glad to afford any information to any one applying to me either personally or by letter.

Glassworkers' Cataract.

In the notice of the *Second Report of the Departmental Committee on Compensation for Industrial Diseases* published last week, p. 28, in line 25 from top, first column, Dr. Legge was unfortunately misrepresented; it should have been stated that he reported "that all classes of glass furnace workers appeared to suffer," not all glassworkers.

Lactic Acid Bacilli.

Dr. George Herschell (London, W.) writes: Dr. Bushnell's advocacy of the use of cultures of lactic acid bacilli in liquid form whilst admirable in theory is, I am afraid, impossible in actual practice, mainly from the impossibility of securing delivery of such cultures commercially at the patient's house. Whilst agreeing with his contention, I have for some time abandoned the use of them in favour of dried cultures, with which I have obtained the best results. As regards the contamination of the latter, whilst considerable in the case of tablets made from inspissated milk, it may be neglected in those manufactured simply by the addition of an inert powder to the dried bacilli. In these the contamination from the air is not greater than we find in most ordinary articles of diet. I should like to ask Dr. Bushnell whether the Thermos flask will stand sterilization by boiling.

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